The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 23. No. 7-A TULSA, OKLAHOMA, JULY 10, 1924

Copyright, 1922, by The Petroleum Publishing Co.

TABLE OF CONTENTS

Special Articles

Crude Prices Cut as Production Gains ---- 19
By Andrew M. Rowley
Big wells completed in Oklahoma with important development in Kansas. Luling output reaches 50,000 bbls. daily.

Motorist Investigates—Article No. 13 ---- 20
Questions gasoline users ask frankly answered. All there is to the fluctuations of prices in oil industry.

Oil Men Bid Millions Without Quibble ---- 21
By Ralph T. Baker
Auction of Osage leases gives remarkable demonstration of outstanding type of company executives.

Curtailment Means Prosperity Later ---- 23
By William H. Gray
Producers of crunde petroleum ureg dto conserve resources until oil is needed. Pleads for small operators.

Three Years' Efforts to Find Oil in Vain ---- 23

Legislation From the Wrong End ---- 24
By Charles E. Bowles
Lawmakers think only of prices when they should study fundamental conditions in the industries affected.

Patent Suit Prepared most Carefully ---- 25
By L. M. Fanning
Exhaustive investigation evident in petition filed by Government. Many important features involved.

Production and Consumption in Japan ---- 28
By Charles E. Kern
Petroleum Division, Department of Commerce, research investigator summarizes present oil situation in Empire.

Answer Agitation Against Curb Pumps ---- 32
By L. M. Fanning
Declared indispensable to motorists and industry and an insurance against fire risks in handling gasoline.

A Lost Opportunity (Editorial) ---- 34

Big Oil Fire Extinguished With Water ---- 36
By C. D. Lockwood
Unique method successfully used by the Tidal Oil Co. in Cromwell Field. Enormous gas fire presented difficulties.

Articles of General Interest

The Advertisers' Index ---- 17
Men Known in Oildom and Personals ---- 60
Natural Gas Developments ---- 66
Equipment and Supplies ---- 68
Steel Production Held Well ---- 68
Baku Reports Gusher in New Sand ---- 70
Stressing Pennsylvania Grade ---- 72
Plan Program for Petroleum Research ---- 78
Gross Production in May ---- 80
New Specifications for Casing ---- 92
Increased Activity in Venezuela ---- 98
Classified Wants Advertisements ---- 118-119
Crude Petroleum Statistics ---- 152

Field Operations

Oklahoma ---- 38
By C. D. Lockwood
Big wells mark week's operations in Oklahoma despite proration and curtailed buying.

North Central Texas ---- 40
By Dan F. Dugan
Increase in wildcat production from Mitchell and Reagan counties.

Kansas ---- 42
By C. D. Lockwood
Four thousand-barrel well 10 miles west of Independence.

North Louisiana-Arkansas ---- 44
By M. L. Vaughn
Smackover believed to have passed its peak in production.

Mexico ---- 46
By George Blardone
Transcontinental gets 100,000-bbl. well in Panuco

California ---- 48
By L. P. Stockman
Only three wells put on production at Torrance last week

Canada ---- 50
By Victor Lauriston
Big gasser completed in Candian West.

Gulf Coast ---- 52
By P. I. McGreal
Good wells completed in Luling Field.

Wyoming ---- 54
By F. B. Taylor
Well in Sunburst Field makes 1,000 bbls. daily.

Central West ---- 54
By Whit
Usual amount of new work being done in this territory.

Pennsylvania-West Virginia ---- 56
By D. S. Wakenight
Good producers completed in southeastern Ohio.

West Kentucky-Tennessee ---- 58
By Vern T. Whitney
One hundred-barrel well completed in Cumberland County at 325 feet.

East Central Texas ---- 58
By Staff Correspondent
Richland Field continues to attract interest.

Initial Production Shows Big Decline ---- 62
Flush output of wells completed east of California in June nearly one-third less than for May. Less new work.

Detailed Operations Western Fields in June ---- 140

Crude Petroleum Statistics ---- 152

Refining and Marketing

Natural Gasolines Continue to Climb ---- 22
By C. O. Willson
All grades higher. Straight run gasoline weak and lower in price. Little change in other products.

Mid-Continent Refinery Runs Increase ---- 88
By C. O. Willson

Refining and Marketing Briefs ---- 106

South Dakota Gasoline Contest Argued ---- 106

Modern Cracking Process Described ---- 108
By Hans Tropsch
Methods of operation of principal ways to obtain gasoline are outlined. Cracking itself explained.

No General Reduction Expected in East ---- 108
By N. O. Fanning

Weather Unfavorable for Autoists ---- 110
By John B. Waldo

The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 23. No. 7-A TULSA, OKLAHOMA, JULY 10, 1924

Copyright, 1922, by The Petroleum Publishing Co.

TABLE OF CONTENTS

Special Articles

Crude Prices Cut as Production Gains ---- 19
By Andrew M. Rowley
Big wells completed in Oklahoma with important development in Kansas. Luling output reaches 50,000 bbls. daily.

Motorist Investigates—Article No. 13 ---- 20
Questions gasoline users ask frankly answered. All there is to the fluctuations of prices in oil industry.

Oil Men Bid Millions Without Quibble ---- 21
By Ralph T. Baker
Auction of Osage leases gives remarkable demonstration of outstanding type of company executives.

Curtailment Means Prosperity Later ---- 23
By William H. Gray
Producers of crunde petroleum ureg dto conserve resources until oil is needed. Pleads for small operators.

Three Years' Efforts to Find Oil in Vain ---- 23

Legislation From the Wrong End ---- 24
By Charles E. Bowles
Lawmakers think only of prices when they should study fundamental conditions in the industries affected.

Patent Suit Prepared most Carefully ---- 25
By L. M. Fanning
Exhaustive investigation evident in petition filed by Government. Many important features involved.

Production and Consumption in Japan ---- 28
By Charles E. Kern
Petroleum Division, Department of Commerce, research investigator summarizes present oil situation in Empire.

Answer Agitation Against Curb Pumps ---- 32
By L. M. Fanning
Declared indispensable to motorists and industry and an insurance against fire risks in handling gasoline.

A Lost Opportunity (Editorial) ---- 34

Big Oil Fire Extinguished With Water ---- 36
By C. D. Lockwood
Unique method successfully used by the Tidal Oil Co. in Cromwell Field. Enormous gas fire presented difficulties.

Articles of General Interest

The Advertisers' Index ---- 17
Men Known in Oildom and Personals ---- 60
Natural Gas Developments ---- 66
Equipment and Supplies ---- 68
Steel Production Held Well ---- 68
Baku Reports Gusher in New Sand ---- 70
Stressing Pennsylvania Grade ---- 72
Plan Program for Petroleum Research ---- 78
Gross Production in May ---- 80
New Specifications for Casing ---- 92
Increased Activity in Venezuela ---- 98
Classified Wants Advertisements ---- 118-119
Crude Petroleum Statistics ---- 152

Field Operations

Oklahoma ---- 38
By C. D. Lockwood
Big wells mark week's operations in Oklahoma despite proration and curtailed buying.

North Central Texas ---- 40
By Dan F. Dugan
Increase in wildcat production from Mitchell and Reagan counties.

Kansas ---- 42
By C. D. Lockwood
Four thousand-barrel well 10 miles west of Independence.

North Louisiana-Arkansas ---- 44
By M. L. Vaughn
Smackover believed to have passed its peak in production.

Mexico ---- 46
By George Blardone
Transcontinental gets 100,000-bbl. well in Panuco

California ---- 48
By L. P. Stockman
Only three wells put on production at Torrance last week

Canada ---- 50
By Victor Lauriston
Big gasser completed in Candian West.

Gulf Coast ---- 52
By P. I. McGreal
Good wells completed in Luling Field.

Wyoming ---- 54
By F. B. Taylor
Well in Sunburst Field makes 1,000 bbls. daily.

Central West ---- 54
By Whit
Usual amount of new work being done in this territory.

Pennsylvania-West Virginia ---- 56
By D. S. Wakenight
Good producers completed in southeastern Ohio.

West Kentucky-Tennessee ---- 58
By Vern T. Whitney
One hundred-barrel well completed in Cumberland County at 325 feet.

East Central Texas ---- 58
By Staff Correspondent
Richland Field continues to attract interest.

Initial Production Shows Big Decline ---- 62
Flush output of wells completed east of California in June nearly one-third less than for May. Less new work.

Detailed Operations Western Fields in June ---- 140

Crude Petroleum Statistics ---- 152

Refining and Marketing

Natural Gasolines Continue to Climb ---- 22
By C. O. Willson
All grades higher. Straight run gasoline weak and lower in price. Little change in other products.

Mid-Continent Refinery Runs Increase ---- 88
By C. O. Willson

Refining and Marketing Briefs ---- 106

South Dakota Gasoline Contest Argued ---- 106

Modern Cracking Process Described ---- 108
By Hans Tropsch
Methods of operation of principal ways to obtain gasoline are outlined. Cracking itself explained.

No General Reduction Expected in East ---- 108
By N. O. Fanning

Weather Unfavorable for Autoists ---- 110
By John B. Waldo

Crude Prices Cut as Production Gains

Average daily production in United States week ended July 5, 2,019,095 bbls. Gain over previous week, 22,863 bbls.

Big Wells Completed in Oklahoma With Important Development in Kansas. Luling's Output 50,000 Daily

By Andrew M. Rowley

Highest daily average estimated production this year, week ended July 5, 2,019,095 bbls. Lowest, January 12, 1,871,143 bbls.

Price reductions in the Eastern, Gulf Coast, North and East Central Texas and Central West fields, a substantial increase in production for all fields of the United States and the continued bringing in of wells of the gusher type in various sections of Oklahoma, Kansas, North Texas, the Gulf Coast and Southwest Texas despite the fact the Prairie Oil & Gas Company is prorating its runs of crude in the Mid-Continent and other large purchasers are limiting their buying to their market requirements, characterized the crude petroleum situation during the past week.

Operators generally were surprised at the reduction of from 25 to 50 cents a barrel announced in the prices of Pennsylvania crude, this cut of Monday of this week being the second within a month, the two reductions totaling $1 a barrel for the Bradford and Allegany grades and 75 cents a barrel for the other Pennsylvania grades. It is claimed in the East the reduction this week resulted from the continued small purchases by refiners despite the fact gasoline consumption has shown a good increase. The reduction in Pennsylvania was followed immediately by a cut in the Central West fields ranging from 10 to 15 cents a barrel. On Tuesday of this week the Humble Oil & Refining Company reduced its prices on all grades of Gulf Coast, North Central and East Central Texas crudes 25 cents a barrel. Other major purchasers with headquarters in the East were expected to meet the Humble's price.

While crude price reductions were more or less expected as a result of the policy of proration and curtailed buying adopted by the major purchasing companies in the Mid-Continent area, the action of the Humble focussed attention more strongly upon the price structure in the Mid-Continent and it was regarded as merely a question of time until other purchasers would announce new schedules of prices.

A number of fields of the country were responsible for the increase in production of crude during the week, Oklahoma showing a gain of about 3,000 barrels a day, chiefly from the Cromwell Pool which registered an average increase of about 6,000 barrels; the Luling Field in Southwest Texas gaining an average of 9,000 barrels a day; the Wyoming-Montana area showing an increase of about 5,000 barrels, while Kansas gained more than 3,000 barrels a day and California was up 1,000 barrels daily.

PRODUCTION IN THE UNITED STATES

Estimated daily average production in the oil fields of the United States for the week ended July 5 and a comparison with previous week follows:

	July 5	June 28
Oklahoma—Northern Fields:		
Tonkawa	35,725	36,150
Burbank	88,625	91,900
Other Osage Fields	48,990	48,000
Cushing and Shamrock	23,950	23,915
Bristow and Eastern Bristow	49,925	50,200
Cromwell	37,675	31,250
Stroud	21,735	22,135
Northern Miscellaneous	101,550	100,600
Southern Fields	74,600	75,450
Total Oklahoma	482,775	479,600
North Louisiana	54,130	55,005
Arkansas—		
El Dorado and Calion	12,680	12,565
Smackover Light	37,940	37,475
Smackover Heavy	99,515	101,415
Stephens and Nevada County	3,480	3,560
Total Arkansas	153,615	155,015
North Central Texas	127,975	126,565
East Central Texas, (Mexia, Currie, Corsicana, Powell)	121,200	122,517
Kansas	79,400	76,150
Total Mid-Continent Area	1,019,095	1,014,852
Gulf Coast	80,580	79,935
Southwest Texas	58,055	46,015
Eastern	107,975	107,950
Wyoming-Montana	128,390	123,480
California—		
Santa Fe Springs	59,000	59,000
Long Beach	160,000	160,000
Huntington Beach	45,000	46,000
Torrance	59,000	58,000
Remainder of State	302,000	301,000
Total California	625,000	624,000
Total United States	2,019,095	1,996,232

Increase, 22,863 Barrels

Development work in Oklahoma during the week resulted in a number of completions above the average. A well on the famous Pettit lease of the Marland Refining Company, in Osage County, started at the rate of 340 barrels an hour from sand at 2,627-37 feet. The third well to reach the recently discovered deep sand in the Tonkawa Field came in during the week making 76 barrels an hour. There are about 46 wells drilling to this deep sand. Two wells marking extensions ot the Cromwell Field were completed during the week, a northeast extension making 100 barrels an hour while the well in the northwest extension made as high as 170 barrels an hour.

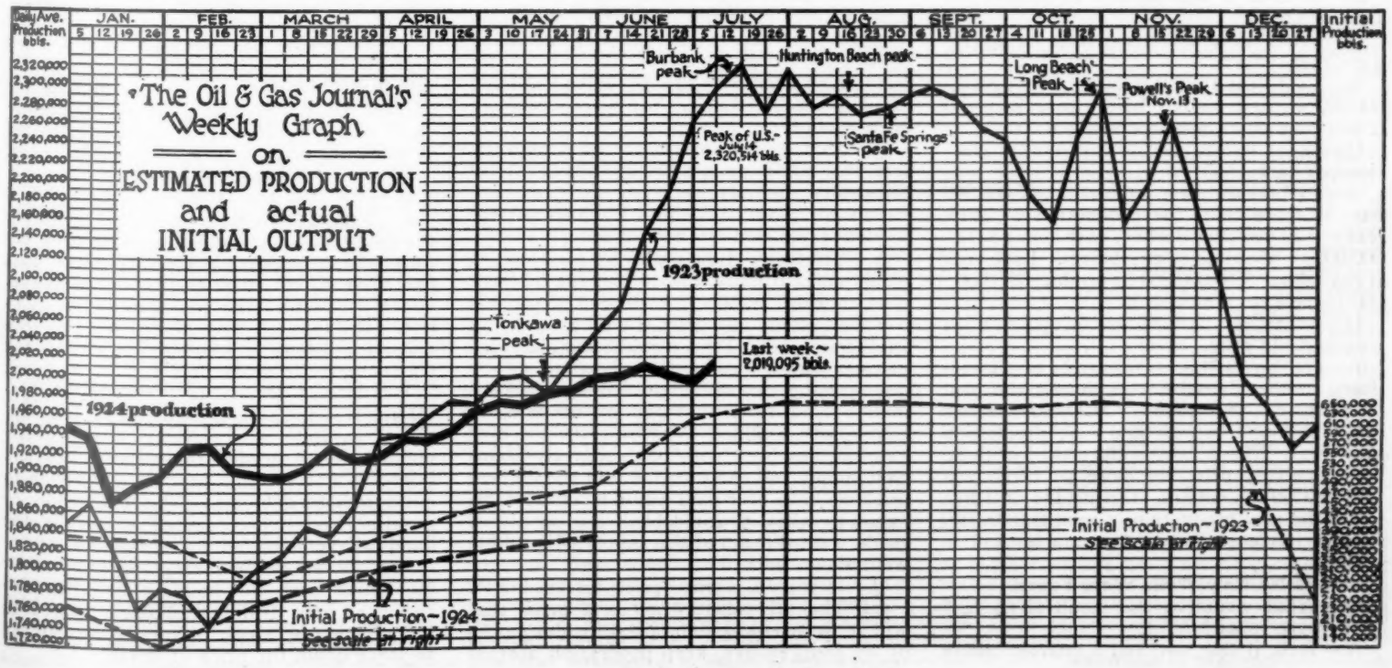
Kansas loomed to the front with the completion of a 4,000-barrel well in the Wilcox sand about 10 miles west of Independence. The well is regarded as one of the most important discoveries in Kansas in years. It is located in the southwest corner of the southeast of Section 28-32-14, about 4 miles southeast of Elk City and about 6 miles southeast of the old Elk City gas field.

Completions in the Luling Field in Southwest Texas helped materially in swelling production there. The J. K. Hughes Development Company brought in a well which started at the rate of 5,500 barrels, later dropping to 4,400 barrels. The Grayburg Oil Company's No. 7 McKean was making 8,000 barrels of fluid, 20 per cent water at first and later 40 per cent water. The Magnolia Petroleum Company advanced its price of Luling crude to $1 a barrel effective July 1.

Production of the Powell Field in East Central Texas continues to decline, averaging 87,000 barrels a day last week.

The south end of the Sunburst Field in Montana attracted attention last week when a well was completed there making 1,000 barrels a day, it being the second good well completed in that district within the past two months.

Little change in production was recorded in California during the past week, Torrance showing a gain of 1,000 barrels, Huntington Beach a loss of a similar amount while the outside pools of the State gained 1,000 barrels daily, resulting in a net gain in production of 1,000 barrels daily.


Daily Ave. Production bbls.
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
Initial Production bbls.
The Oil & Gas Journal's Weekly Graph on ESTIMATED PRODUCTION and actual INITIAL OUTPUT
Burbank peak
Huntington Beach peak
Long Beach Peak
Powell's Peak Nov. 13
Peak of U.S. July 14 2,320,514 bbls
Santa Fe Springs peak
1923 production
Tonkawa peak
Last week 2,019,095 bbls
1924 production
Initial Production—1923
See scale at right
Initial Production—1924
See scale at right

Motorist Investigates---Article No. 13

Questions Gasoline Users Ask Frankly Answered. All There is to the Fluctuations of Prices in Oil Industry

Q.—How many oil wells are there in the United States?

A.—About 300,000.

Q.—How much oil do they produce annually.

A.—About 735,000,000 barrels in 1923.

Q.—How much is that a day?

A.—Less than 7 bbls. per well daily.

Q.—How does the production run from year to year?

A.—In 1922 it amounted to 557,000,000; in 1923 it increased 178,000,000 barrels, due to the new flush wells in California and Powell.

Q.—What was the production in 1913?

A.—About 248,000,000 barrels.

Q.—Does the production from each well hold up from year to year?

A.—No, it declines on an average of 20 per cent. If there had been no wells drilled in 1914 the production which was 248,000,000 in 1913 would have been only 200,000 barrels in 1914.

Q.—How many new wells are drilled each year?

A.—There were 21,170 producing and dry holes drilled in 1914, bringing the production up to 265,000,000 barrels instead of the 200,000,000 it would have been if there had been no new wells drilled and we had been depending on the wells of 1913 which, with the 20 per cent decrease, would have produced only 200,000,000 barrels.

Annual Average of New Wells

Q.—Was that an exceptional year for new wells, 1914?

A.—No, if anything it was below the 10 years' average. There were 222,676 oil wells and dry holes drilled from 1913 to 1923, an average of 22,267. In 1920, the year following the highest price for oil, there were 31,099; in 1915 only 12,359. Last year there were 22,089.

Q.—What is the average cost per well?

A.—In 1913 it was figured at $10,000; in 1923 at $22,500.

Q.—What do new wells cost as an aggregate each year?

A.—Last year the oil industry spent $500,000,000 on new wells. In the past 10 years it has cost on an average $346,000,000.

Q.—What is the cost of this new production per barrel?

A.—In 1914 the new production, 65,000,000 barrels more than the production of 1913, less the 20 per cent decline, cost about $212,000,000 or about $3.30 per barrel. Last year it cost about $500,000,000 to produce 289,000,000 barrels from new wells.

Q.—What is the average proportion of new and old production?

A.—Of the 4,124,000,000 barrels of oil produced in the United States during the past 10 years not less than 1,200,000,000 barrels or 30 per cent represented new production each year. The 222,000 wells drilled in these 10 years cost probably close to three and one-half billion dollars. During the past five years the new production of over 800,000,000 barrels has cost two and a quarter billion dollars.

If No New Wells Were Found

Q.—What would be the result if no new wells were found?

A.—Well, if that two and a quarter billion dollars had not been spent to drill about 120,000 new wells in the past five years the 285,000,000 barrels total estimated production of oil from existing wells in 1918 would have dwindled to about 150,000,000 barrels at the end of 1923.

Q.—Then it may be concluded that it will cost about half a billion dollars annually for new wells to maintain the production?

A.—Yes. The figures for the past five years show that unless the same proportion of new wells and new production is found from year to year our supply of oil will dwindle and that with the advancing cost of drilling the total of $500,000,000 spent on new wells in 1923 will have to be duplicated annually to maintain our supply.

Q.—How is this money raised?

A.—There are just three ways for the oil industry to get this money: Oil companies must themselves find it from earnings and "plow it back" into the business; or they must get it from the public through the purchase of stocks and bonds of oil companies, or by a combination of both methods.

Q.—But will the public invest in oil companies after so many "fakes?"

A.—The investing public will have to differentiate between sound and "fake" oil companies. There are oil companies whose securities rank with the highest in any line of activity. It is by investments in these that the money for new drilling must be obtained. Money "invested" in "fake" concerns is very seldom spent on actual drilling or real oil work.

Q.—Do lower prices for oil affect oil securities and credit?

A.—Of course, as in any other business. A drop in the price of oil securities which would follow lower prices for oil would be a severe blow to the oil industry in as much as it would make it difficult not only for the oil companies to continue to finance large stocks without drawing on their own surplus but also to finance continued expansion necessary to supply the growing needs of consumers of oil products. On the other hand, such financing can be managed from earnings, provided prices for oil products are high enough.

Q.—That is, low prices for oil would affect the credit or borrowing power of oil companies and also prevent their earning money to "plow back" into the business for needed expansion or new drilling?

A.—Precisely. Low prices for oil products would make it more difficult for the oil business to raise money for needed expansion but they would also hurt the oil industry in another respect. They would bring about inevitably lower production of crude oil by discouraging investment in drilling and ultimately lead to a shortage of oil and, of course, of gasoline. Whatever the price of gasoline has been with our relatively abundant supply you can imagine that the highest price we have ever paid would be cheap compared to what it would be if our supply of crude went down and the supply of gasoline went down with it.

Q.—Is there a normal price for crude?

A.—The oil industry needs a price that will be sufficient to maintain sufficient stocks of oil and gasoline, keep production abreast of consumption and maintain its credit so that it can carry on the expansion which is necessary to that end.

Q.—Do oil companies as a matter of fact "plow back" earnings into the business for expansion?

A.—One example of recent date comes to mind. A burden of $10,000,000 in the case of its Powell crude was carried by the Standard Oil Company of New Jersey without public financing. The stocks accumulated in that field were financed out of the company surplus. In California last year such companies as the Standard Oil Company of California, the Shell Union Oil Company, and other refining companies had to finance large stocks of crude over their current requirements. Not only has the money to be found for new drilling but in case of overproduction as at present for new storage, storage that in many cases will never be used but once.

Discouraging Drilling

Q.—What effect will the threat of Congress and the State legislators to regulate the industry have upon the public's investment needed for drilling new wells?

A.—You can figure it for yourself. No one is likely to be encouraged to invest his or her money in a business that is subject to political interference. Look at the railroads. The chief difficulty of the railroads has been to attract money needed for improvements from the investing public which has fought shy of Government regulation limiting railroad rates and therefore earnings.

Q.—You mentioned that the largest number of new wells drilled in the past 10 years was in the year following the highest price for oil—what did that mean?

A.—It means that new drilling is encouraged by fair prices for oil, just as when oil is down to low prices new drilling declines.

Q.—What is the present situation regarding new drilling?

A.—Following the slump of the temporary overproduction in California and Powell last year there was hope of increased prices for oil last December and January. Instantly there was a revival of new drilling, invited by hope of profitable prices for oil this year.

Cause and Effect

Q.—But that has changed. has it not?

A.—Unfortunately, yes. That new drilling campaign has been only too successful, because the unseasonable weather of the first five months kept down the use of motor cars and consequently the consumption of gasoline. The refiners, like the drillers, had been expecting better prices this year and had started early to stock up for the big season. The failure of demand to come up to expectations left the refiners with a big oversupply of gasoline, representing large investments. Some needed the money they had hoped to get for this product and began to cut prices to get cash. This oversupply of gasoline and unprecedented stocks on the hands of refiners led to curtailment of refinery operations, lessening the demand for oil, which with the increase in production from the new drilling campaign, caused an increase in the stock of oil and threatened to force down the price of crude.

Oil Men Bid Millions Without a Quibble

Auction of Osage Leases Gives Remarkable Demonstration of Outstanding Type of Company Executives

By Ralph T. Baker

A certain amount of criticism may be directed justifiably at the oil industry and the men who conduct the operations of the different branches of this business which now ranks second in value of its products in the nation. There are some features, however, of which all men connected with this huge enterprise may exhibit considerable pride.

Its movements have been like a huge army. It has swept into a barren and unproductive country, and in a few short years has conquered it and made it productive. Some waste has resulted, and some inefficiency has been brought out, but it remains a fact that a big work has been done and that big men have been developed.

When it is considered that the span of activity in the oil industry dates from the decade following the discovery of the Drake well in Pennsylvania in 1859, its development to its present status is more remarkable. The one thing that has made this record possible has been the development of the executives who have headed the major operating, transporting, refining and marketing concerns. These men rightfully stand near the head of the list of big executives representing all industries of the country.

Osage Sale An Example

At no place does the sterling character of the officials of Mid-Continent producing companies come out more clearly than in the periodical auctions of Osage Indian leases at Pawhuska. At this event millions of dollars are bid and paid without a quibble. Many companies have profited remarkably from the purchases and others have lost money in later development without complaint.

It is no small feat for a man in any line of business to purchase several million dollars worth of raw material at one time. Great business ability is required. Considerable effort in preparation is necessitated and the most expert of technical consultation is given such a move. When it is considered that Osage Indian leases often are purchased for more than a million dollars and that a like sum must be spent in rushed development work before any returns can be realized, something of the enormous tasks on the hands of executives of Mid-Continent producing companies can be seen.

Twenty-four sales of Osage Indian leases have been held from November 11, 1912 to June 30, 1924, or an average of two annually. A total of 815,077 acres of land has been offered at these sales, ranging in size from 3,020 acres put up on June 20, 1916 to 107,594 acres offered at the first sale and 100,305 acres offered March 18-19, 1924. Of the 815,077 acres offered, a total of 607,717 acres has been purchased by Mid-Continent operating companies.

Many Millions Invested

At these 24 sales, Mid-Continent producers have spent a total of $93,193,124.36 for the right to drill for oil. It is safe to say that a larger amount was spent in securing the flush production from many of the leases before the properties were put on a steady production program. Two hundred million dollars is a large amount of money for any industry to invest in a small area before obtaining any raw material which is sought. The total amounts of the bonuses from the sales have varied from $39,436, paid out on November 11, 1912, to $14,193,800 paid out for the right to develop acreage purchased March 18-19, 1924.

It is no wonder then that the atmosphere at Pawhuska is surcharged with excitement on the day for an auction of oil leases. The older Osage Indians are present on the streets in their blankets and colorful garments. They take a personal interest in the proceedings which have enabled them to secure quarterly payments from the tribal oil and gas royalties equal to an annual wage for many of the nation's workers. More recently these sales have drawn newspaper representatives from the larger Eastern dailies, magazine writers and business men from the larger cities as well as adventurers in search of a thrill.

The thrills have been many, and the Osage lease auctions have gone down in history as unique affairs. They have never been duplicated by the oil industry in any other part of the country and no other industry has ever produced any event which can compare with them.

Enormous Risk Involved

It is a hard task for the most stoical person to sit idly and unconcernedly while two or three men or more are bidding for an untried piece of property in jumps of $5,000 to $50,000 each, occasionally nearing the $2,000,000 mark before the purchaser of a lease on a 160-acre tract is finally determined. When it is realized that another $1,000,000 must be spent for equipment before any oil is secured, making a total outlay of more than $3,000,000 with a fair chance of losing the entire amount, some idea of the risk involved in the auction can be seen.

"The Osage lease auctions are unique in portraying the caliber of the executives at the head of the larger Mid-Continent producing companies," declared one Eastern business man, after conceding the peculiar character of the assembly with its blanketed Indians, geologists, field men, Eastern visitors and spectators from all parts of the continent. "I have never seen anything like it," he continued. "It is an event that would receive recognition in any circle. But at these sales, your oil company official shows his true ability. He proves himself a leader among men, capable of keeping his head under the most trying conditions."

At typical recent Osage lease sales, it is the ordinary procedure for the cheaper, lower-priced tracts to be offered during the morning and early afternoon, reserving the high-priced Burbank acreage for the climax of the sale late in the day. Few of the leading executives are seen in the audience or the boxes of the theater where many of the auctions are staged, until the time for the sale of the better tracts. A little stir is noticeable among the onlookers standing about the entrance at the back of the room as the heads of the larger concerns, known to be angling for the price tracts, come forward to the front seats later in the day.

Scene Tense and Dramatic

Heads crane and mental notations are made as first one and then another of the capable officials proceed to their accustomed places. Colonel Ed Walters, the tribal auctioneer, who conducts the auctions, goes ahead serenely with his business, taking little notice of the increased tensity among the audience of bidders and thrill-hunters before him. His business is to see that the individual tracts command the highest possible price without delaying the sale.

A little breathing spell is given the crowd just before the larger tracts are knocked down. The bidders on the larger tracts assemble their production experts, scouts and geologists as well as financial advisers, and the opposing forces get set for the battle royal which is soon to ensue.

At the magic word, "Burbank," from the mouth of Colonel Walters, bidders and spectators alike sit forward on their seats. That is, all the bidders, except those known to be vitally interested in the disposal of the choice tracts, display an increased interest in the progress of affairs. These latter men, who do the highest bidding, sit calmly in their seats, awaiting the action on tracts which they desire.

The sale is the culmination of weeks of investigation and appraisal work on the part of company employes. Runs from offset wells have been reported and studied minutely. The character of the sand, depth of the well, drilling conditions, thickness of the producing formation and other technical features of the surrounding properties have been investigated in detail by the company geologists. An appraisal of the cost of development of the properties has been made and submitted together with an estimate on the probable extent of the producing sand and the amount of oil recoverable. Every angle and detail of the properties, announced as part of the choice parcels of acreage, has been talked over in executive conferences and in many cases a limit on expenditure for the acreage has been set. The royalties of one-sixth and one-fifth of the oil produced from the prospective acreage has been deducted from the estimated production and estimates are made on the time necessary to "pay out" on the property. Upon these many factors, the bidding executives base their bids, in many cases, however, contingent upon the action of their competitors.

Many Start at $100,000

During the preliminary part of the sale, most of the tracts have been offered on a minimum initial bid of $500 for the quarter section. The crowd has become accustomed to hearing this amount named as the first bid on all but the most choice parcels of the acreage sold. When Burbank tracts are announced the spectators "get ready for the fireworks," to quote from Colonel Walters.

As a result it is not unusual for an initial bid of $100,000 or more to be made on the better tracts. Only a few bidders attempt to enter the lists in the competition for the Burbank acreage. The strife generally occurs between two or three companies. In most cases one official will make a substantial initial bid and a competitor will counter with one slightly higher. In some cases, where the executives wish to get the tracts for the least possible money, the bidding progresses with a series of $1,000 bids, much to the evident disgust of Colonel Walters, the auctioneer.

"You fellows like to bid," he will remark occasionally, in an attempt to get the bidders to progress by larger amounts. "All right, then, I can stay here as long as you can," he will retaliate, when it becomes evident that the bidders are going to be economical and cannot be hurried.

The entrance of another bidder, at the time one of the previous bidders seems to have reached the end of his financial string, brings out a ripple of excitement from the crowd. The duel is on again with a fresh contestant. It is not unlikely that another will make his way into the battle with the weakening of the third contestant, and as the million-dollar mark is approached or exceeded, the nervousness of all except the bidders themselves is quite noticeable.

A Slight Nod Means Much

The sale of every expensive tract, regardless of price, follows approximately the same procedure. A keen-eyed, firm-lipped executive, surrounded by his advisors is seated in one of the theater boxes or near the front of the room. He is alive to the work of the autioneer and listens intently for the bids of his competitors. Bidding at times is halted momentarily as he glances at a map or takes counsel from his men as the amount of the bid reaches the higher figures. No delay of any appreciable consequence is caused and a slight nod from the executive signifies the willingness of the bidder to accept the figure called out by the auctioneer, who then turns to the opposing bidder in another box, with a higher proposal. A slight nod from the second bidder gives the signal to the auctioneer who turns again to the first bidder with an increased proposal.

Quietly and unostentatiously the bidders wage their battle. On very few occasions during the 15-minute battles over leases which have at times sold for as much as $1,990,000, have the contestants spoken to the auctioneer, asked for the amount already bid or sought advice from their own company officials or men. It was a case where a nod meant the expenditure of thousands of dollars and in some cases, millions.

(Continued on Page 136)

A.—Well, if that two and a quarter billion of oil and gasoline, keep production abreast to force down the price of crude.

Natural Gasolines Continue to Climb

All Grades Higher in Price. Straight Run Gasolines Again Weaken With Reductions in New Navy. Little Change in Other Products

By C. O. Willson

Natural gasolines were again the only product to display any strength in the Group 3 (Oklahoma) refined market during the past week. Backed with a steady demand, coupled with a disposition on the part of the manufacturers to hold back in their sales, all grades advanced from ¼- to ½-cent. Buyers have found that the manufacturers are determined to take full advantage of the improved situation which has brought the first real strength to natural gasolines since January and to date, there have been no breaks in the general advance which has been under way since the middle of June.

Other gasoline prices are either the same as last week or lower. The principal weakness applies to the New Navy grade. This product declined from the 9¼- to 9½-cent level to 9 and 9¼ cents the latter part of last week and Monday enough was being purchased at 8¾ cents to make it a market factor. The higher gravity gasolines and naphtha prices generally, up to this writing were not changed. Fuel oil prices were generally firm after the slight weakness which developed following the announcement of the proration of crude effective July 1 by several of the major purchasing companies. There was little change in the remaining refined products.

Slump in New Navy

Several opinions have been advanced as to the cause of the slump in New Navy gasoline. Some believe it a development of the crude proration just mentioned, while others hold the 25- to 50-cent reduction in Pennsylvania crudes on Monday responsible, although the weakness had resulted in cheaper gasoline before the lower crude prices became known.

Others see in the situation simply a duplication of what has already been demonstrated in the Oklahoma market several times this year with the developments just mentioned minor contributing factors. They believe the immediate reason for the decline lies in the fact that refiners advanced their prices too much when the latest export developed a little over two weeks ago.

Within a few days after the Carson Petroleum Co. made its several million gallon purchase of New Navy aviation gasoline in the Mid-Continent Field shortly after the middle of June, refiners advanced their prices from 1 to 1½ cents within a period of a few days. It will also be recalled that similar action was taken when the Standard Oil Co. of New Jersey purchased 10,000,000 gallons of New Navy gasoline the middle of May and largely the same situation developed in March when the first export buying out of the Mid-Continent Field developed.

Effect of Exports

The idea back of these advances in many cases seems to be that higher prices following an export purchase will drive the domestic buyers into the market. Obviously these higher prices have had the opposite effect. The sellers overlook the fact that this cry of "Wolf" has been sounded so often during the past two years, that instead of bringing domestic buyers into market, it serves to drive many of them out, resulting in a condition in which the market actually derives no permanent benefit from these export purchases which under normal conditions are a very important price factor. The purchase of approximately 25,000,000 gallons of gasoline for export from Mid-Continent refiners in May and June, coupled with an increased domestic demand, resulting in substantial reductions in stock, should have at least brought firm markets but despite this situation gasoline prices now are approximately 2 cents lower than they were the first of May.

Developments the past two weeks amply demonstrate the reaction to these rapid advances in the gasoline prices. A heavy domestic gasoline consumption was under way when the Carson Petroleum Co. made its last export previously purchased. So anxious were many refiners to take advantage of the higher prices which they felt would follow the placing of the order that the Carson Company had difficulty in placing its business, although its price was in line with the prevailing domestic spot market at the time of the purchase.

Domestic Trade Not Alarmed

Although requirements were greater than at any other time this year, the domestic trade was not alarmed when within three days the price of gasoline was advanced 1 cent and more to them. Some jobbers, appreciating the importance of any export order were willing to pay ¼- or ½-cent more, but when they were asked a full cent, in many instances where they had some storage, they got out of the market. Largely the same situation applies to the marketers and other resale agents. Although many refiners are inclined to discount the market importance of these resale agents, the fact remains that in the present scheme of marketing refined products, they have a very important place in the spot market and when they are not buying there is a reasonable certainty that the market generally does not have that activity necessary to maintain firm or advancing prices.

There is a possibility that the higher prices also drove some further export buying from the market. There were other inquiries in the market at the time the Carson purchase was made and shortly afterwards. All these domestic and export buyers felt that the higher prices could not be maintained and their judgment has again been vindicated. It serves to weaken general confidence in the market and will make it more difficult for the sellers to maintain what price strength the market actually merits. In brief, as expressed by one veteran market observer in Group 3, it is going to be difficult to convince the trade when "the wolf" actually arrives.

The observer just quoted and many others, believe that these ups and downs of the gasoline market can be replaced with a slowly advancing market providing they avoid the large overnight increases and thus maintain a steady export and domestic movement.

Less Stocks

On the favorable side of the gasoline situation is to be listed the 6,290,378-gallon decrease in gasoline stocks in the Mid-Continent Field reported by the Western Petroleum Refiners Association for the week ending June 28. The peak in gasoline stocks, according to the association's report for the Mid-Continent area alone was the week ending May 10 when the stocks totaled 146,262,486 gallons. This does not include the stocks of Gulf Coast refiners reporting to the association. The stocks June 28 totaled 132,807,524 gallons, a reduction of 13,454,962 gallons, or a little less than 10 per cent. for a period of seven weeks.

Although this is not a large reduction, considering the season, it is probable it is as large or larger than in the country generally. In this connection the trade anxiously awaits the May report of the Bureau of Mines which should be announced this week. Due to the California report of the Bureau of Mines announced 10 days ago, many fear the total reductions, if any, in gasoline stocks in May will not be as large as hoped for. The California report showed an increase of 20,000,000 gallons in gasoline stocks. It is estimated that at present there are approximately 1,500,000,000 gallons of gasoline in storage.

Crude Situation

The crude situation which is being closely watched by the trade has had little change in the past week. The proration of several of the major buyers, effective July 1, has not resulted yet in "bootleg" crude being available to the refiners. Several of the refiners have stated during the past week they do not believe that crude will be available under the posted price in the fields in which they purchase their supplies. This situation applies mainly to the older fields. Even in the newer fields the excess crude has not made its appearance and in most cases, due to a lack of pipe line connections, it would not be available to independent refiners should there be more crude than the large buyers are willing to take.

Gasolines and Naphtha

It is generally conceded that another export purchase or some exceptionally heavy domestic buying is needed to prevent a further decline in gasoline prices. Buyers of New Navy were able to purchase at 8¾ cents the first of the week and this price has been shaded in Group 3 in at least a couple of instances for resale. An export purchase has come to the rescue of the market twice in the last six weeks and many believe it will materialize again. Rumors have been current placing every export buyer in the field in the market. It is known that all are keeping in close touch with the market and some actual buying may develop before the end of the week.

One large Kansas refiner was making inquiries both for New Navy and aviation the first of the week for export. The company is understood to have made no definite proposition to the refiners, but is endeavoring to secure options covering a mixed cargo for delivery the latter part of the month. The company has not previously handled export business and has not made any definite announcement as to its connections in this instance. Should the purchase materialize it will be a distinct aid to the market.

The gasoline consumption over July 4 and the week end was only fair, due to cold weather. There was no flood of orders from domestic jobbers on Monday in the hands of refiners as a result of the consumption.

The naphtha movement has been strong enough the past week so that prices have not taken the same decline as New Navy. The same situation applies to higher gravities. In the latter case, many refiners did not advance these grades with the latest advance in New Navy and for that reason have not found it necessary to reduce. The domestic movement of the higher gravities continues slow.

Kerosene and Distillates

The kerosene movement and prices are unchanged. Two refiners are known to have made substantial sales at present prices for delivery over the balance of the month. Other plants have refused to lower their prices for delivery over the last half of the month. On the other hand there is enough available so that marketers are not having any difficulty placing their business at current quotations. There is no disposition on the part of refiners or buyers to speculate for a longer period than July.

Although there is little activity in spot market for distillates practically all the refiners interviewed the past week stated they had inquiries for delivery over the domestic consuming season extending from September until late in the spring. Very few refiners in the past have been interested in this class of business. They make comparatively little distillate and dispose of this on the spot market. However, due to the numerous inquiries, many are considering its possibilities. Some of the buyers want a lower grade than the 38-40 straw and also are seeking a lower price. Perfections in domestic burners

(Continued on Page 135)

REFINED MARKET BAROMETER

Due largely to reductions in crude prices in several fields refined markets throughout the United States were generally unsettled during the past week. This applied to practically all products. Gasoline prices were firm in the extreme East but the general price level in all other areas was lower than it was a week ago with a distinct weakness apparent in the Mid-Continent and Middle West regions. Natural gasolines were the only exception to this situation and they are strong except in California where the weakness continues. Kerosene and distillate prices were generally firm with a fair movement reported from most areas except the west coast. Weakness was apparent in fuel and gas oils especially in the East although there were no general changes in prices. Neutrals and cylinder stocks were weak, although bright stocks were strong. Wax was unchanged.

Mid-Continent—All gasolines with the exception of natural gasolines were generally weak with lower prices prevailing in all areas. Buying was confined to the domestic market and this was not sufficient to maintain recent advances. Kerosene and distillate prices were unchanged with fair domestic movement. Fuel and gas oils were weaker in some areas and firm in others. Lubricating oil market unsettled with prices lower where any changes occurred. Wax unchanged.

Atlantic Seaboard—Better tone in gasoline and lubricating markets due to heavy consumption with no general changes in prices. Fuel oil soft with lower prices expected in both bunker fuel oil and gas oil. Export market active with largest kerosene movement in weeks. Wax prices firm.

West Coast—Larger consumption aids gasoline market although cheap natural gasolines make possible considerable price cutting in southern California. Little demand for engine distillates and they are being used for blending stock. Kerosene market soft. Lubricating oils and fuel oils firm.

Pennsylvania—Reductions in Pennsylvania crude and unsettled market although gasoline prices continue fairly firm. Improved demand for kerosenes. No change in fuel oils. Neutrals weak with prices lower. Improved demand for wax, higher prices prevailing.

Gulf Coast—Seasonal slump in consumption of neutrals and lower crude prices expected to bring still lower refined prices. Fuel and gas oil movement steady.

Chicago—Cold weather retards gasoline consumption. Expectation of crude reduction in Mid-Continent Field factor in weak gasoline market. Good movement of kerosenes and prices are firm. Slow movement of fuel and gas oils.

Curtailment Means Prosperity Later

Producers of Crude Petroleum Urged to Conserve Resources Until Oil Is Needed. Pleads for Small Operators

By William H. Gray

Delivered before the Petroleum Division of the Fort Worth Chamber of Commerce, Fort Worth, Texas, July 7

I come to you today for the purpose of pleading with you to make this a prosperous year in the oil industry and to beg you to assist in the campaign of conserving petroleum, our greatest natural resource in this State, until it is needed.

Theoretically, the oil industry is in a better position this year than it was last year; practically, and when I say practically, I mean from the standpoint of stability of the market structure, it is in but very little, if any, better condition than it was at this time last year.

The tank car price of gasoline steadily declined throughout the year until at this time, the opening of the greatest gasoline season the industry has ever known, it has touched the low point of 8 cents per gallon f. o. b. Fort Worth, while natural gasoline touched the low point of 5¾ cents f. o. b. Fort Worth. Anyone who is at all familiar with the hazards of the petroleum industry knows very well that neither the refiner nor the producer can survive such prices. What is the matter with the industry?

First of all there is too much crude above the ground; stocks of both crude and refined oils are too large. If the industry is to prosper and the independent refiner and the independent producer in the Mid-Continent Field are to survive, a portion of the present stocks of crude and refined oil must be liquidated. So much oil has been brought to the surface and stored in the last two or three years that we have brought upon ourselves the criticism that we are wasteful and extravagant with a necessity of life that cannot be replaced. Leaders in the industry are in one accord that enough oil has been brought to the surface of the earth and that the industry must make up its mind that any additional oil brought to the surface and stored will be wasteful and that it consequently must be kept in the ground.

Surplus of Crude in Storage

There is altogether in storage about 471,000,000 bbls. of oil of which it may be easily said 271,000,000 bbls. is field storage; by this I mean surplus over and above the ordinary operating requirements of the industry. Of the 271,000,000 bbls. of surplus stocks at least 71,000,000 bbls. are held for speculative purpose; it is storage held by companies which bought this crude oil, not for refining in their own refineries but for the purpose of selling it to others and until this 71,000,000 bbls. is liquidated the market is always in danger of being upset by the offering of large quantities of this oil for sale. There was, according to the report of the Bureau of Mines on April 30, 1924, approximately 1,600,000,000 gallons of gasoline in storage, an excess of at least 300,000,000 gallons over normal requirements for this season. The piling up of gasoline stocks has been going on steadily since last January and until they begin to show a decline the price of gasoline cannot be expected to improve.

Mid-Continent producers may as well face the facts they are doing too much drilling. An effort was made to curtail production in the three principal flush pools of Oklahoma, viz., Stroud, Cromwell and Tonkawa. The producers in these pools have been unable so far to agree upon any curtailment of development and the result is that they have brought an order of general proration upon the entire industry.

This brings me to a discussion of the price structure as it stands today and the various orders that have been issued. I desire at this point to make one more plea for the conservation of the small wells throughout the Mid-Continent Field. It is as important to the refiner and to the pipe line company that these small wells be conserved as it is to the people who own them. It cannot be gainsaid that the hampering of the operations of these wells steadily destroys them, and, therefore, I appeal to the companies who have put in these orders of proration to conserve these small wells, that the older properties be given the preference and let the proration fall heavily upon those who have brought it about. Let them turn the gate valve on the 2,000-bbl. well and give the small producer a chance to live. It is by this means only that the small well can be preserved and that the wasteful policy of drilling in the new wells in new areas when the production is not needed can be curbed.

Price-Making Policies

It is not my purpose to hurl any anathemas; every company has a right to pay whatever it wants for oil; it has a right to raise its price and lower it as it may desire, based upon its own requirements and ideas as to what the customer is entitled to. It was, however, with deep regret that I learned of the cut in the posted price of the Magnolia Petroleum Co. aggregating 75 cents per barrel and I take this occasion to plead with it and beg it, on behalf of the many small producers throughout the Mid-Continent area, to raise this price and pay as much to its customers as its competitors are paying to theirs. It would manifestly seem unfair that a small producer should be penalized for doing business with a concern of this kind. It was with equal regret that I learned that The Texas Co., after putting on a storage order in certain areas, has offered to purchase this oil at a price based on the Magnolia schedule. This appears to be an industrial incongruity. The Texas Co. is big enough and strong enough to post a price of its own. It should not only do this but it should stand or fall on the price it puts on its own board. I take this occasion to express the appreciation of the small producers throughout the Mid-Continent area to those companies which have been willing to pay a living wage price to the producer for his products. The Humble Oil Co. is to be congratulated for having restored the prevailing posted price throughout the Mid-Continent Field after having cut that price approximately 75 cents per barrel and having discovered later that it was a mistake to do so and it is entitled to the thanks of its customers for having so magnanimously returned to them approximately $125,000.

The oil industry must and will survive or perish together. There cannot be for any great length of time a posted price by one company which is at wide variance with another. The leveling process is bound to take place. One price will go up or the other come down. It remains to be seen whether the Magnolia Petroleum Co. will rehabilitate its market structure or whether the other major purchasing companies will come down to the level now maintained by the Magnolia Petroleum Co. The answer to this lies in the hands of the producers. Heretofore, proration orders have always meant lower levels of prices but there is a chance this year, if producers make a determined effort to curtail development, to prevent such a debacle.

Need to Curtail Drilling

While the situation is inherently sound, it remains to be seen whether producers will keep it so. The remedy? There is but one rememedy; curtail all drilling operations and shut the wildcat wells down; it must be done,—it will be done. It is a question as to whether or not you will disregard all economical conditions or former precedents and have the drill shut down with $1 crude; this remedy has always been known to be effective. I have been criticised in some quarters for discussing prices. An economist will tell you that price is the determining factor of any commodity. The program I urge upon you is that fundamentally sound one of conservation. It brings home to you the necessity of curtailing operations. I would be a derelict in my duty if I did not point out to you the financial consequence of disregarding industrial practices.

Many of you well remember the hectic days when Fort Worth was crowded with oil operators. Burkburnett, Desdemona and other north Texas fields were in their hey-day. Where are these fields today? They are in the small production class and it is for this class that I am fighting. Let me say to the citizens of Fort Worth and the citizens of Texas that they are just as much interested in conserving this great natural resource as is the producer himself. Fort Worth has come to be recognized as one of the leading oil centers of the United States. A great deal of its prosperity naturally depends upon the prosperity of the many producers scattered throughout its trade territory. I call upon the banks and the business men generally to aid in this policy of consering this great natural resource, which once gone cannot be reproduced. Generally, the public is of the impression that no one has any interest in producing oil wells except the men that own them; they look upon them oftentimes as mere speculators and are inclined to take what they can get while the getting is good. This, however, is an erroneous idea. Every man, woman and child in the State of Texas is in the oil business. The State of Texas has a royalty of 2 per cent in every barrel of oil produced in the State. With a fair price from the public and the conservation of these resources, Texas should have the greatest road system, the greatest public school system and the greatest prosperity of any State in the Union. In summing up, let me say finally to the producers, if they would stand together, rack the tools and cut out the drilling by October 1 we should have a generous share of prosperity.

THREE YEARS' EFFORTS TO FIND OIL IN PHILIPPINES ARE UNSUCCESSFUL

After an effort covering a period of five years the Standard Oil Co. (California) is abandoning its prospecting operations on Bondoc Peninsula, Island of Luzon, of the Philippine group, which have been conducted by the Richmond Petroleum Co., a subsidiary of the Standard Oil Co., according to the Standard Oil Bulletin, published by the Standard Oil Co. of California. A description of the hardships endured gives a picture of difficulties encountered in the search for oil with which the public is almost unfamiliar. The "Bulletin" in describing the work in the Philippines, says:

"So ends a great venture to find a new supply of oil for the future. The holes drilled at Bondoc proved to be "dusters." The area prospected, which seemed promising from the surface indications, does not bear oil beyond traces, and the wildcatters are striking camp and coming home.

"The Philippine expedition furnishes a striking example of the hazards of the oil industry. The search for hidden deposits of petroleum is uncertain—the industry seeks and sometimes finds, and sometimes doesn't. In either case the expense is great, requiring resources of vast size. The expenditures in the Philippines will run to approximately $1,250,000. There is compensation, however; for where many wildcat ventures may fail one may succeed with profitable results. Such is the history of oil.

Industry's Responsibility

"The Bondoc venture proves, too, that there is something more to the oil industry than merely the manufacture and sale of petroleum products. Back of the gasoline pump, which is the public's principal point of contact with this vital industry, there is a stupendous activity of which the public is little aware—an activity which leads to the ends of the earth in a quest for new oil. The public hears much of success, of wells gushing quantities of "black gold." Of the failures, of the great financial risks, of the great losses which often must be borne, it knows very little.

"The world moves on oil, and it is the obligation of those engaged in the industry never to permit the supply to fail. Hence, the unceasing search, which nowadays goes far afield. This company today has drilling parties in Alaska, Colombia, Ecuador, and Argentina, as well as in several States at home, while its geologists are scouring the earth for likely-looking territory.

"Having heard reports of favorable surface conditions on the Bondoc Peninsula, the company initiated its own geological survey in 1919. In the spring of 1920 it was recommended that the company should drill, and lands were then acquired. In 1920 there was a shortage of oil on the Pacific Coast. California fields did not produce enough to meet the rapidly growing demand. Later, new fields were discovered here, which finally brought a condition of overproduction. But in 1920 a great task confronted this company—that of keeping up an unfailing supply of petroleum to meet the requirements of the future. Hence, it was decided to wildcat at Bondoc.

"In December, 1920, an expedition sailed from San Francisco for Manila. Everything necessary to life and work had to be shipped from California. The shipment ran to a thousand tons of material. The timber for the rigs, all machinery, road building apparatus, and even the supply of manila rope were placed aboard and transported across the Pacific, along with a field hospital equipment. Twenty-five California oil field workers composed the party.

"The field of operations was in a wild, scarcely inhabited region of southern Luzon, well away from civilization, a tropical land of great heat and torrential rain, an area of typhoons, of fetid humidity and lurking disease, of snakes, monkeys and alligators, deer and wild pigs. Men and materials were lightered ashore at the mouth of the Pagsanghan River, and the first camp was built several miles from the sea. There were no roads; the area was covered with head-

(Continued on Page 135)

Legislating From the Wrong End

Lawmakers Think Only of Prices When They Should Study Fundamental Conditions in the Industries Affected

By Charles E. Bowles

Law-making in the United States has grown with our marvelous industrial development, and has been an inseparable part of it.

In surveying the 135 years of our National life during which our Nation and our States have been enacting laws, we are amazed to see the preponderance of industrial legislation.

The outstanding fact in the United States, especially since 1860, has been our remarkable industrial growth—and while we take railroads, steamships, telephones, telegraphs, automobiles, airplanes, light and power plants, irrigation, taxation and legislation as matter of fact things in our daily life, we seldom stop in our rush toward a bigger industrial development to think of these things in the aggregate.

And yet it is these things, in the aggregate, that our Government deals with. It sees our population as a unit—our industries as a unit—our natural resources as a unit—and practically all of our national legislation has been formulated with this basic idea in mind.

Business of Government

And when the individual tries to bridge the gulf and see 110,000,000 people instead of the few hundred that he knows, or 265,000 miles of railroad instead of the few lines he has traveled over, or 50,000,000 carloads of cereal crops instead of the few hundred bushels that he raised or 200,000 factories instead of the one he works in, he quickly discovers that he is looking at his daily associations from an entirely different angle. And he realizes that it is somebody's business to look at the industries of the country as a unit—and to formulate laws for them.

And this is the business of government—the responsibility of government. "Our government must face our industries, and our industries must face our government"—and one of our biggest problems has been to have industry maintain its proper relation towards legislation—and to have legislation maintain its proper relation toward industry. And it is perfectly obvious that in 135 years both industry and legislation have made some mistakes.

When this country was small in population, small in industries, small in material wealth, but rich in the spirit that created our government, it was not impossible for our legislators to advise themselves fully on practically all of our problems, both State and National But today, as the wealthiest, the most powerful and the greatest industrial nation in the world, we know that our legislators are not, and cannot possibly be, fully informed on all of the problems of all of our industries—and we don't expect them to be.

Inescapable Responsibility

And right here is the inescapable responsibility as "industry faces government, and government faces industry"—both are indispensable—and neither can discharge its responsibilities except by the fullest and most sympathetic understanding of the other's problems and limitations.

As a concrete illustration of "how government faces industry" let's take the case of a newly-elected Congressman and see some of the problems of our industries that we expect him to help solve.

Here are a few of the things that he finds out very quickly: The United States today has a population of about 110,000,000. The last estimate of our national wealth, made in 1912, placed it at $187,000,000,000—and that vast figure has probably been doubled in the last 12 years.

Our slightly less than 7,000,000 farms, with buildings, implements, machinery and live stock were valued by the Government at $75,000,000,000. In 1922 our farmers "did a business" of $15,000,000,000 from the sale of crops, animals and animal products.

From our forests we cut timber each year equivalent to over 50,000,000,000 board feet—enough to build a 3-foot walk, of 1-inch boards, 3,000,000 miles long. And we are cutitng that much timber every year.

From our coal mines we are taking over 400,000,000 tons of coal a year—and if we loaded it into 40-ton cars, each 40 feet long, one year's production would make a train long enough to reach three times around the world.

We are taking 50,000,000 tons of iron ore out of our mines every year—and making from it over 35,000,000 tons of steel.

Exports Ten Millions Daily

In 1922 our exports amounted to $3,831,000,000, and our imports to $3,112,000,000—or an average of almost $10,000,000 a day.

We have about 60,000 miles of electric railways that are carrying about 13,000,000,000 passengers a year. Our 265,000 miles of steam railroads cost over $20,000,000,000, and are carrying over 1,000,000,000 passengers, and 1,600,000,000 tons of freight a year. And they employ half as many people today as there were in the United States when our Government was founded.

Our lakes, rivers and canals are carrying over 200,000,000 tons of freight a year—besides millions of passengers.

We have 3,000,000 miles of "road" in the United States today—of which less than 1 mile in 4 is "good" road. But we are spending $1,000,000,000 a year on road building and when the present program is completed our entire highway system will represent an aggregate "investment" of probably $20,000,000,000.

We have about 2,000,000 miles of "single wire" telegraph line, about 50,000 miles of ocean cable and over 27,000,000 miles of telephone wire in use today.

Annual Payroll 25 Billions

About 41,000,000 men and women—and children over 10 years of age—earn wages and salaries in the United States—and, averaging all of them at say $600 a year, we have an annual "payroll" of close to $25,000,000,000.

The "new enterprises" chartered in 1922 had an authoried capitalization of $8,400,000,000 of which total probably a very substantial amount was subscribed by "the people."

And when it comes down to our own national Government our newly-elected Congressman would find a balance sheet for 1922 about as follows:

Receipts

Customs revenue	$ 357,000,000
Internal revenue	3,208,000,000
Miscellaneous revenue	526,000,000
Panama Canal	12,000,000
Public debt	6,018,000,000
Total	$10,121,000,000

Disbursements

Departments	$ 3,195,000,000
Readjustments of payments, etc.	164,000,000
Public debt	7,030,000,000
Total	$10,389,000,000
Excess of disbursements over receipts	$ 268,000,000

He would also learn that, for the year ending June 30, 1923, his predecessor had voted for appropriations amounting to $3,675,000,000— and that now it was his turn to vote. However, as a sort of reassurance of our country's "solvency" he would learn that the resources of all of our banks were over $50,000,000,000.

And these are only a few of the many big things that would remind him of the vastness of this country's industries—and of his new legislative responsibilities.

As great masses of figures these millions and billions are meaningless—but as representing the vast and varied industries of the United States they drive home an almost terrifying realization of the responsibility of "helping our Government face our industries."

That Congress operates by the "Committee System," and that a mere handful of men in each house are in control of these committees, is a matter of common knowledge. That the chairmanship of committees goes with "seniority of service," rather than because of broad experience with the particular kind of legislation to be handled by the committees, is also a matter of common knowledge. And because of the potentialities of this obviously wrong legislative practice, "the folks back home" are not only interested in knowing that constructive legislation is enacted, but that destructive legislation is not enacted.

Government and Oil

And it is equally obvious that as long as things are as they are a constructive cooperation must be maintained between "the folks back home" and Washington—especially by the folks back home.

And this is true today—particularly with the petroleum industry. One-third of our United States Senators come from States in which oil is produced in greater or less quantities. Two-thirds of our Senators come from States producing no oil at all. Of our 96 Senators 18 come from the States that last year produced 95 per cent of the oil, 14 come from States that produced 5 per cent of the oil and 64 come from States that produced no oil at all.

In other words the States east of the Mississippi, with a vast market for fuel oil and with 63 per cent of all the cars and trucks in the United States, send 14 Senators from oil-producing States and 38 from States that produce no oil. Of the States west of the Mississippi 18 Senators are from oil-producing States and 26 from States that produce no oil.

The nine States that last year produced 95 per cent of our crude oil had 20 per cent of the cars and trucks in the United States—the seven States that produced 5 per cent of the oil had 48 per cent of the cars and trucks in the United States—the seven States that produced 5 per cent of the oil had 48 per cent of the cars and trucks—and the 32 States that produced no oil at all had 32 per cent of the cars and trucks. Set up in a table the distribution would look like this:

States	% of Oil	% of C. & T.	U. S. Senators
9	95	20	18
7	5	48	14
32	0	32	64

Eighty per cent of our cars and trucks are in States that produce 5 per cent of our crude oil and send 78 of our 96 Senators to Congress.

Votes for Cheap Gasoline

When the last speech has been made and the vote is ready to be taken, either this coming winter or at any future time, will our United States Senators vote for the petroleum industry—or will they vote for "cheap gasoline?"

And herein lies the necessity for constructive relationship between the folks back home and the United States Senate. And if the much-discussed legislation that is to "regulate" the petroleum industry is formulated by Mr. La Follette and his committee, who are without exception from States that produce no crude oil, and who certainly are not practical oil men, and whose interests as revealed to date may be summarized by the words

(Continued on Page 128)

NEED FOR COMMISSION AND WHAT IT CAN DO

If our National and State Legislators, State officials and users of petroleum products could get a clear vision of the vital problems and their far reaching influence in establishing a "fair price" for the industry's products much of the present misunderstanding would disappear.

As a constructive relationship between our industry and the National and State Governments and a sympathetic understanding of the industry's problems by the people, are vital to one and all, a National Petroleum Commission is suggested.

This Commission would be the great common ground upon which the petroleum industry, the National and State Governments and the people would stand and from which the industry would be assured a just profit and the people an equitable service—neither of which would result in price regulation by the Commission but both of which would result from the normal operation of industry.

This Commission would naturally be representative of every branch of the petroleum industry and would cooperate with the proper departments at Washington in formulating an industrial program that would be the starting point in petroleum legislation.

This program would deal with causes rather than with effects—with the basic conditions underlying the industry rather than final prices, with fundamentally sound conditions in the producing and refining of crude oil rather than the price of gasoline, knowing that right prices follow right conditions in industry.

In the haste to legislate Congress frequently neglects to investigate and thereby unintentionally but surely gives industry "the hot end of the poker," leaving it to shift for itself and make a profit if it can.

A National Petroleum Committee, representative of every department of the industry, could be immediately created by the industry itself, to work out a basis upon which a National Petroleum Commission would be created next December and the general lines along which it would function.

Patent Suit Prepared Most Carefully

Exhaustive Investigation Evident in Petition Filed by Government. Many Important Features Involved

By L. M. Fanning

Careful study of the Government's patent suit leads to the conclusion that the Department of Justice acted only after an exhaustive investigation of the particular phase of the oil business attacked. The petition filed in the Northern District Court of Illinois, Eastern Division —Chicago—is conceded by the oil people who have studied it to be a masterly legal document, the preparation of which, together with the sustaining evidence held in reserve, could only have been accomplished after long and painstaking research. This indicates that the suit was not hurriedly contrived. Nevertheless, the political effect is considerable, and much will be heard of the suit during the coming campaign. The Department of Justice was directed by President Coolidge to investigate oil affairs in February, and it has been actively engaged in this labor since that time. At the same time the Federal Trade Commission started its investigation at President Coolidge's direction, and its report, recently filed with the President and referred by him to the Department of Justice has led to some speculation as to whether the present suit was not an outgrowth of its recommendations. It is plainly indicated by the Department of Justice, however, and there is support in the exhaustiveness of the petition filed, that the suit was a result of the department's work independent of the Federal Trade Commission. It is also possible that the Department of Justice was working up evidence in the case before the President's specific instructions were received.

Long Study Preceded Suit

* * * * *

A long legal battle is ahead in connection with the Government's charges. Already there has been plenty of private litigation concerning cracking plants, and some of these cases to a greater or lesser degree have involved the question of valid patents covering the basic feature of pressure processes. All officials of companies involved in the suit express confidence in the validity of the patents procured in the usual manner, their various processes having been developed after a great expenditure in scientific research and experimentation. Obviously the Standard Oil Company of Indiana would be the most affected of all companies named as defendants, in a final adverse decision, as it is the largest licensor of cracking processes. Should the Government contention, that all present processes are in all substantial respects the same processes as those long since expired, be upheld, all cracking processes would be thrown open to use by any concern desiring them and the present licensor companies would be deprived of royalties. The latter would not, however, be deprived of the use of their processes and present equipment. The effect on the respective defendant companies would vary in the degree that they have extended their business of licensing.

Long Legal Fight Ahead

* * * * *

An interesting angle to the Government's view of the cracking patent situation is the charge that the procuring of present patent rights is but a device to lend color of legality to the alleged combination, conspiracy and monopoly. The cracking art has developed as an essential refining improvement necessary to procuring an adequate supply of gasoline. It is questionable whether this art, as well as any scientific development, would have reached the stage of commercial success without the inventors and developers having been assured of protection and reward furnished by the patentability of the process. The scores of patents granted and the hundreds of applications for patents covering patent processes reflect the activity and progress in this direction. As gasoline demand increased it became more and more necessary for companies either to use the cracking process as licensees or develop their own cracking methods. It is probable that the Government will contend that the great amount of litigation growing out of the various patents, this litigation being based on alleged infringement, merely substantiates the charge that all recent patents cover only improvements in apparatus and processes and that similarity causing litigation reveals the common basic feature of pressure distillation, the patent upon this basic feature having long since expired. Interested companies point out the difference between a scientific theory, as represented in the Young patent, and the commercial application of the theory.

Cracking Developed As Patentable

* * * * *

Men who are pushing the Government suit are credited with the statement that the public is paying $66,500,000 annually for cracked gasoline because of royalties thus added to the price that is passed on to the consumer. Officials of the Department of Justice at Washington declined to comment on this statement. The statement raises the question as to what the public would be paying for gasoline today if the commercial cracking processes had not been developed. One oil man who was asked to comment on this angle said he estimated the consumer would be paying 40 or 50 cents a gallon and that the automobile would be years behind its present position.

Fifty Cent Gasoline Without Cracking

* * * * *

The suit will probably hinge largely on the contracts which have been entered into for the use of cracking processes. The Government named the following as "primary defendants:" Standard Oil Company of Indiana, Standard Oil Company of New Jersey, Standard Development Company, to the extent that its parent company, Standard Oil Company of New Jersey, has conveyed to it patents and alleged patent rights relating to cracking processes; The Texas Company and Gasoline Products Company. Agreements made by and between these companies it lists as "primary agreements." These agreements, it charges, together constitute an effective pooling arrangement between the primary companies whereby they have restrained and monopolized interstate and foreign trade and commerce and have provided for the perpetuation of such restraint and monopoly even beyond the life of their existing patents. The petition states that a condition of several of these agreements is the delivery by one party to the other of "duly executed copies" of other primary agreements. Thus each agreement, it says, was executed with full notice and in consideration of the others and the purpose to form a combination or pool is fully disclosed.

Contracts Will Have to Stand Court Test

* * * * *

The principal primary agreements under attack in the Government's petition are the following: An agreement dated April 15, 1915, by which the Indiana Company assigned to the New Jersey Company all of its existing and prospective patent rights for certain foreign countries and the New Jersey Company agreed not to sell nor permit to be sold products manufactured by it in foreign countries in the Indiana Company's territory. By agreement dated August 15, 1915, the Indiana Company licensed the New Jersey Company, the latter's manufacturing territory being limited and it being forbidden to sell the products manufactured in Indiana territory. This agreement was in effect superceded by one executed March 15, 1917. By agreement dated August 26, 1921, the Indiana Company and The Texas Company licensed each other and also granted to each other the right to issue sublicenses under their respective rights. The right of The Texas Company to manufacture within Indiana territory was restricted to the extent that the Indiana Company reserves the right to purchase one-third of the production of The Texas Company by pressure cracking in that territory in excess of 25 per cent of the production of the Indiana through operations of the same character in the same territory. By agreement dated January 26, 1923, The Texas Company and the Gasoline Products Company exchanged patent rights.

Primary Agreements Under Attack

* * * * *

By agreement dated September 28, 1923, the Indiana Company, New Jersey Company and The Texas Company exchanged certain rights, a part of the consideration being agreement by the New Jersey Company to deliver to The Texas Company "a duly executed copy of a certain grant" of patent rights from the New Jersey Company to the Gasoline Products Company, agreement by The Texas Company to deliver to the New Jersey Company copy of grant of patent rights from the Gasoline Products Company to the New Jersey Company, agreement by the Indiana Company to deliver to The Texas Company copy of grant from the former to the Gasoline Products Company, and agreement by The Texas Company to deliver to the Indiana Company copy of grant of foreign patent rights from the Gasoline Products Company to the Indiana Company. By another agreement having the same date further rights were interchanged between the four companies, including agreement by the Indiana Company, New Jersey Company and The Texas Company to form a sublicense agreement which, according to the petition, contains unlawful restrictions on the amount of gasoline which sublicensees may produce.

Agreement Between Four Companies

* * * * *

Two agreements, dated October 1, 1923, are cross licenses between the New Jersey Company and the Gasoline Products Company, each made in consideration of the other. Two agreements dated October 5, 1923, consist of exchanges between the Standard of Indiana and the New Jersey Company of certain foreign rights. By agreement dated October 1, 1923, The Texas Company and the Gasoline Products Company exchanged certain rights, part of the consideration being agreement between the two companies to deliver "duly executed copies of certain grants" from the several companies mentioned as primary defendants.

Gasoline Products Company Agreements

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
50-52 450 end point (Naphtha)	.08½	.09	.08½	.09	.08¼	.08¾
56-58 450 end point	.08½	.08¾	.08½	.09	.08¼	.08¾
58-60 437 end point (New Navy)	.09	.09¼	.09¼	.09½	.09	.09½
60-62 400 end point	.10	.10¼	.10¼	.10½	.09¾	.10
64-66 375 end point	.11	.11¼	.11¼	.11½	.10¼	.10¾
68-70 360 end point	.11½	.11¾	.11¾	.12	.11¼	.11½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.08½	.08¾	.08½	.08¾	.08½	.08¾
56-58 450 end point	.08½	.08¾	.08¾	.09	.08¾	.09
58-60 437 end point (New Navy)	.08¾	.09¼	.09¼	.09½	.09	.09¼
60-62 400 end point	.10	.10¼	.10	.10¼	.10	.10¼
64-66 375 end point	.10½	.10¾	.10¾	.11	.10½	.11
68-70 350-365 end point	.11¼	.11½	.11¼	.11¾	.11¼	.11½
KANSAS—						
58-60 437 end point (New Navy)	.09	.09¼	.09¼	.09¾	.09	.09½
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.08	.08¼	.08	.08¼	.08	.08¼
50-52 440 end point (Naphtha)	.08½	.08¾	.08½	.03¾	.08½	.08¾
56-58 450 end point	.08½	.08¾	.08¾	.09	.08½	.09
58-60 437 end point (New Navy)	.08¾	.09	.09¼	.09½	.09	.09¼
60-62 400 end point	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
64-66 390 end point	.10¼	.10½	.10½	.10¾	.10½	.10¾
64-66 375 end point	.10½	.10¾	.10¾	.11	.10¾	.11
68-70 360 end point	.11¼	.11½	.11¼	.11½	.11¼	.11½
NORTH LOUISIANA—						
56-58 450 end point	.08½	.09	.08¾	.09	.08¾	.09
58-60 437 end point (New Navy)	.09	.09¼	.09¼	.09¾	.09	.09½
60-62 400 end point	.10¼	.10½	.10¼	.10½	.10¼	.10½
64-66 390 end point	.10½	.10¾	.19½	.10¾	.10½	.10¾
64-66 375 end point	.10¾	.11¼				
ARKANSAS—						
58-60 450 end point	.08¾	.09	.09	.09¼	.08¾	.09
58-60 437 end point (New Navy)	.09	.09½	.09½	.09¾	.09	.09¼
64-66 375 end point	.10½	.10¾	.10½	.10¾	.10½	.10¾
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (New Navy)	.11¾	.12¼	.12	.12½	.11½	.12
PENNSYLVANIA—						
52 Naphtha	.11½		.11½		.11½	
54 Naphtha	.12		.12		.12	
56 Gasoline	.12		.12		.12	
58 Gasoline	.12¼		.12¼		1.2¼	
60 Gasoline	.12¾		.12¾		.12¾	
62 Gasoline	.13½		.13½		.13½	
64 Gasoline	.14¼		.14¼		.14¼	
66 Gasoline	.15		.15		.15	
68-70 Gasoline	.16¼		.16¼		.16¼	
CALIFORNIA—						
54-56 437 end point (New Navy)	.10½	.11½	.10½	.11½	.10½	.11½

*Colorado points.

NATURAL GASOLINE

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
Grade A, 72-78, under 375 e.p., rec. 90%	.07½	.07¾	.07¼	.07½	.06¾	.07
Grade B, 76-82, 375 end point, rec. 85%	.07	.07¼	.06½	.07	.06¼	.06½
Grade C, 80-88, 350 end point, rec. 78%	.06¾	.07	.06¼	.06½	.06	.06¼
OKLAHOMA (Group 3)—						
Grade A, 72-78, under 375 e.p., rec. 90%	.08	.08¼	.07½	.07¾	.07	.07¼
Grade B, 76-82, 375 end point, rec. 85%	.07½	.07¾	.07¼	.07½	.06½	.06¾
Grade C, 80-88, 350 end point, rec. 78%	.07	.07¼	.06¾	.07	.06¼	.06½
Grade D, 88-92, 350 end point	.07	.07¼	.06¾	.07	.06	.06¼
NORTH TEXAS—						
Grade A, 72-78, under 375 e.p., rec. 90%	.07¾	.08	.07¼	.07½	.06¾	.07
Grade B, 76-82, 375 end point, rec. 85%	.07¼	.07½	.07	.07¼	.06¼	.06½
Grade C, 80-88, 350 end point, rec. 78%	.07	.07¼	.06½	.06¾	.05¾	.06¼
NORTH LOUISIANA—						
Grade B, 72-78, under 375 e.p., rec. 90%	.07¼	.07¾	.07	.07¼	.06¼	.06½
Grade C, 76-82, 375 end point, rec. 85%	.07	.07¼	.06¾	.07	.06	.06¼
CALIFORNIA—						
68-80 380-410 end point absorption	.09½	.10½	.09½	.10½	.10	.11
78-84 350 end point compression	.10		.10		.10	

MOTOR NATURAL GASOLINE (BLEND)

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
58-62 437 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
60-62 450 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
64-66 450 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
OKLAHOMA (Group 3)—						
60-62 450 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
64-66 437 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
68-70 430-435 end point	.08½	.08¾	.08¼	.08½	.08	.08¼
NORTH TEXAS—						
58-62 440 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
58-60 450 end point	.08½	.08¾	.08½	.08¾	.08¼	.08½
PENNSYLVANIA—						
*60-62	.12		.12		.12	
*64-66	.12		.12		.12	
*66-68	.12		.12		.12	
*68-70	.12		.12		.12	

*At Sistersville, W. V.

BURNING OIL

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
42-43 water white Kerosene	.04	.04¼	.04⅛	.04¼	.04⅛	.04⅜
42-44 water white Kerosene	.04⅜	.04⅝	.04¼	.04½	.04⅝	.04⅝
NORTH LOUISIANA—						
42-43 prime white Kerosene	.04¼	.04½	.04¼	.04½	.04½	.04¾
42-44 water white Kerosene	.04½	.04¾	.04½	.04¾	.04¾	.05
KANSAS—						
41-43 water white Kerosene	.04¼	.04½	.04¼	.04½	.04¼	.04⅜
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04	.04¼	.04	.04¼	.04	.04¼
42-44 water white Kerosene	.04¼	.04½	.04½	.04½	.04¼	.04½
41-43 prime white Kerosene	.03⅞	.04	.03⅞	.04	.03⅞	.04
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07¼		.07¼		.07¼	
NORTH TEXAS—						
41-43 water white Kerosene	.03⅞	.04	.03⅞	.04	.03¾	.04
41-43 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
40-42 prime white Kerosene	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
42-44 water white Kerosene	.04¼	.04⅞	.04⅛	.04⅜	.04⅛	.04¼
ARKANSAS—						
41-43 water white Kerosene	.04½	.04¾	.04½	.04¾	.04½	.04¾
42-44 water white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
PENNSYLVANIA—						
43 Kerosene prime white	.05⅞		.05¾		.05¾	
45 Kerosene water white	.06¼		.06		.06	
46 Kerosene water white	.06½		.06½		.06½	
47 Kerosene water white	.07		.07		.07	
36 Miners' Neutral	.06¼		.06¼		.06½	
34 Neutral	.06½		.06½		.06½	
34 Sundebloomed Neutral	.07½		.07½		.08	
300 Mineral Seal	.06½		.06½		.06½	
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08¼	.08¾	.08¼	.08¾	.08¼	.09
Engine distillate, 42-44 480 end point	.07½	.07¾	.07½	.07¾	.07½	.08

*Colorado points.

FUEL OILS

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
24-26 Fuel Oil (sellers' cars, Group 3)	.80	.85	.80	.85	.77½	.82½
22-24 (El Dorado)	.80	.85	.80	.85	.77½	.82½
18-20 (Smackover)	.75	.80	.75	.80	.75	.80
32-36 Gas Oil	.02¾	.03	.02¾	.03	.02½	.02¾
38-40 Straw distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
KANSAS—						
24-26 Fuel Oil	.95	1.00	.95	1.00	.95	1.00
32-36 Gas Oil	.02¾	.03⅛	.02¾	.03	.02¾	.03
38-40 Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
OKLAHOMA (Group 3)—						
22-26 Fuel Oil (sellers' cars)	.75	.80	.75	.80	.80	.85
24-26 Fuel Oil (buyers' cars)	.77½	.82½	.77½	.82½	.80	.85
24-26 Fuel Oil (sellers' cars)	.77½	.82½	.77½	.82½	.80	.85
28-30 Fuel Oil (sellers' cars)	.90	.95	.90	.95	.90	.95
32-36 Gas Oil	.02¾	.02⅞	.02¾	.02⅞	.02¾	.02⅞
38-40 Straw distillate	.03⅛	.03⅜	.03⅛	.03⅜	.03⅛	.03¼
NORTH TEXAS—						
24-26 Fuel Oil	.80	.85	.80	.85	.80	.85
26-30 Fuel Oil	.90	.95	.90	.95	.90	.95
32-36 Gas Oil	.02¾	.02⅞	.03¾	.02⅞	.02⅝	.02¾
36-38 Gas Oil	.02⅞	.03	.02⅞	.03	.02⅞	.03
38-40 Straw distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
NORTH LOUISIANA—						
20-22 Fuel Oil	.85	.90	.85	.90	.85	.90
32-36 Gas Oil	.02⅞	.03	.03	.03¼	.03	.03¼
38-40 light Straw distillate	.03	.03¼	.03¼	.03½	.03¼	.03½
ARKANSAS—						
38-40 Distillate	.03½	.03¼	.03⅛	.03¼	.03⅛	.03¼
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03¼
22-26 Refinery Fuel Oil	.80	.85	.80	.85	.80	.85
GULF COAST (South Texas)—						
Gas Oil	.04½	.05	.04½	.05	.04	.04½
Fuel Oil	1.60	1.80	1.60	1.80	1.60	1.80
PENNSYLVANIA—						
30-34 Fuel Oil	.05		.05⅛		.05⅛	
36-40 Fuel Oil	.05¼		.05⅝		.05⅝	
CALIFORNIA—						
33-36 Distillate	.03¾	.04¼	.03¾	.04¼	.03¾	.04¼
27-33 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
15-20 Fuel Oil	1.40		1.40		1.40	

ROAD OILS

CHICAGO DIST. (Based on Group 3)—	July 8		July 1		June 24	
50-60 Asphaltic Content	1.10	1.15	1.10	1.15	1.10	1.15
60-70 Asphaltic Content	1.20	1.25	1.20	1.25	1.20	1.30
OKLAHOMA (Group 3)—						
40-50 Asphaltic Content	.95	1.00	1.10	1.15	1.10	1.15
50-60 Asphaltic Content	1.00	1.05	1.15	1.20	1.15	1.20
60-70 Asphaltic Content	1.05	1.10	1.20	1.25	1.20	1.25

NEUTRAL OILS

OKLAHOMA (Group 3)—						
Pale Neutrals:	July 8		July 1		June 24	
70-80 vis., 2½ color, 20-25 cold test	.04	.04½	.04	.04½	.04	.04½
100 vis., 2 color, 20-25 cold test	.05½	.06	.05½	.06	.05½	.06
100 vis., 3 color, 20-25 cold test	.05	.05½	.05	.05½	.05	.05½
150 vis., 3 color, 20-25 cold test	.10½	.11	.10½	.11	.10½	.11
150 vis., 4 color, 20-25 cold test	.10	.10½	.10	.10½	.10	.10½
180 vis., 4 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
180 vis., 3 color, 23-28 cold test	.12½	.13	.12½	.13	.12½	.13
200 vis., 3 color, 23-28 cold test	.13	.13½	.13	.13½	.13	.13½
200 vis., 4 color, 23-28 cold test	.12½	.13	.12½	.13	.12½	.13
220 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.15½	.15
220 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
220 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
280 vis., 3 color, 25-30 cold test	.18½	.19	.18½	.19	.18½	.19
280 vis., 4 color, 25-30 cold test	.17½	.18	.17½	.18	.17½	.18
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.11¼	.12	.11½	.12	.11½	.12
180 vis., 6 color, 23-28 cold test	.12¼	.12¾	.12¼	.12¾	.12¼	.12¾

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

200 vis., 5 color, 23-28 cold test	.12	.12½	.12	.12½	.12	.12½
200 vis., 6 color, 23-28 cold test	.13	.13½	.13	.13½	.13	.13½
220 vis., 5 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
220 vis., 6 color, 25-30 cold test	.14¼	.14¾	.14¼	.14¾	.14¼	.14¾
240 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
240 vis., 6 color, 25-30 cold test	.15¼	.15¾	.15¼	.15¾	.15¼	.15¾
280 vis., 5 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
180-190 vis., R. S. green, 40-50 cold test	.08	.08½	.08	.08½	.08	.08½
190-200 dark green, 40-50 cold test	.07	.07½	.07	.07½	.07	.07½
170-190 dark green, 40-50 cold test	.06	.06½	.06	.06½	.06	.06½
600 E filtered	.20	.21	.20	.21	.20	.21
590-600 Bright Stock	.28	.29	.28	.29	.28	.29
600-610 Bright Stock	.32	.34	.32	.34	.32	.34
Waxes:						
124-126 White Crude Scale Wax	.03¾	.03⅞	.03¾	.03⅞	.03¾	.03⅞
PENNSYLVANIA—						
150, 3 color	.20		.20		.20	
180, 3 color	.22		.22		.22	
200, 3 color	.23¾		.23¾		.23¾	
220, 3 color	.26¾		.26¾		.26¾	
600, steam refined	.18¼		.18¼		.18¼	
635, steam refined	.20½		.20½		.21½	
650, steam refined	.22½		.22½		.23	
600, Pennsylvania flash	.25½		.25½		.25½	
630, Pennsylvania flash	.32½		.32½		.30	
*550, E filtered	.21		.21		.22	
*600, E filtered	.23		.23		.23½	
600, E filtered	.21½		.21½		.22¼	
600, D filtered	.28½		.28½		.29	
550, E filtered	.20		.20		.20	
550, D filtered	.24		.24		.24	
Pennsylvania Bright Stock	.35¼		.35¼		.35½	
†122-124 White Crude Scale Wax	.04½		.04¼		.04⅝	
*122-124 White Crude Scale Wax	.04¼		.04⅛		.04⅜	

*At Warren, Penn. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.08	.09	.07	.08	.07	.08
No. 2 color, 100 vis., pale oil	.10½	.11½	.09½	.10¾	.09½	.10½
No. 2 color, 150 vis., pale oil	.12½	.13½	.12	.13½	.12	.13
No. 3 color, 200 vis., pale oil	.15	.16	.14½	.16	.14½	.15½
No. 3 color, 300 vis., pale oil	.17	.18	.17	.18	.16½	.17½
No. 3½ color, 500 vis., pale oil	.19	.20	.18	.19½	.18	.19½
No. 3½ color, 750 vis., pale oil	.24½	.25½	.25	.26	.24½	.25½
No. 4½ color, 1200 vis., pale oil	.26	.27	.26	.27½	.26	.27
No. 4½ color, 2000 vis., pale oil	.32	.33	.31	.32½	.31	.32
No. 1½ color, 150 vis., pale, filtered	.22	.23	.20½	.22	.20½	.21½
No. 2 color, 200 vis., pale, filtered	.24	.25	.22½	.24	.22½	.23½
No. 3 color, 300 vis., pale, filtered	.27	.28	.26½	.28	.26½	.28
No. 3½ color, 500 vis., pale, filtered	.32	.33	.31	.32½	.31	.32½
No. 3½ color, 750 vis., filtered	.40	.41	.39	.40½	.39	.40½
No. 5 to 6 color, 200 vis., red oil	.13	.14	.13	.14	.13	.14
No. 5 to 6 color, 300 vis., red oil	.15	.16	.14½	.15½	.14	.15
No. 5 to 6 color, 500 vis., red oil	.16½	.17½	.16½	.18	.16	.17½
No. 5 to 6 color, 750 vis., red oil	.22	.23	.22	.24	.21½	.23
CALIFORNIA—						
200 vis., 2½-3 color	.15	.17	.15	.17	.15	.17
300 vis., 3 -4 color	.16	.19	.16	.19	.16	.19
350 vis., 3½-4 color	.17½	.20	.17½	.20	.17½	.20
400 vis., 4 -4½ color	.19	.20	.19	.20	.19	.20
Red Neutrals:						
200 vis., 4½-5 color	.13	.14	.13	.14	.13	.14
300 vis., 5 -6 color	.14	.17	.14	.17	.14	.17
400 vis., 5 -6 color	.16	.18	.16	.18	.16	.18
500 vis., 6 -6½ color	.17	.18	.17	.18	.17	.18
600 vis., 6½ plus	.18	.21	.18	.21	.18	.21

NEW YORK DOMESTIC MARKET

	July 8	July 1	June 24
Motor Gasoline:			
Spot Gasoline, Bayonne	.14½	.14½	.14½
V. M. P. Naphtha, in steel barrels	.19	.19	.19
Lubricating Oil (Industrial) at refinery, Bayonne, N. J.:			
Cylinder, extra light filtered, in barrels	.45½	.45½	.45½
Cylinder, light filtered, in barrels	.39½	.39½	.39½
Cylinder, Bright Stock	.49½	.49½	.49½
Cylinder, steam refined (600)	.31½	.31½	.31½
Black, in bulk	.13	.13	.13
Bloomless, white, 30-31 gravity, 170 vis.	.45	.45	.45
Bloomless, 885 specific gravity	.17½	.17½	.17½
Red Paraffin:			
170 viscosity	.23	.23	.23
212 viscosity	.25	.25	.25
265 viscosity	.25½	.25½	.25½
295 viscosity	.30	.30	.30
Paraffin, 903 specific gravity	.31	.31	.31
*Fuel Oil:			
Bunker Oil, 14 plus, delivered in barges, bbl.	1.75	1.75	1.75
Diesel Oil, at refinery, gallon	.05½	.05½	.05½
Furnace Oil, tank wagon, gallon	.10	.10	.10
Gas Oil, delivered in New York	.06½	.06½	.06½
Wax, fully refined:			
120-122 a.m.p.	.05	.05	.05
125-127 a.m.p.	.05¼	.05¼	.05¼
130-132 a.m.p.	.07	.07	.07
135-137 a.m.p.	.08½	.08½	.08½

*Lighterage, 6.5c a barrel extra.

NEW YORK DOMESTIC PRICES

	July 8	July 1	June 24
Motor Gasoline, in cases, gallon	.28.15	.28.15	.28.15
Motor Gasoline, U. S. Navy, spec. gallon	.14	.14	.14
Naphtha, 60° F., 59-61 spec. grav.	.15.28	.15.28	.15.28
Naphtha, 60° F., 63-66 spec. grav.	.17	.17	.17
Naphtha, 60° F., 66-68 spec. grav.	.18.50	.18.50	.18.50
Kerosene:			
Standard white, in bulk, gallon	.06½	.06½	.06½
Standard white, in barrels, gallon	.13½	.13½	.13½
Standard white, in cases, gallon	.16.90	.16.90	.16.90
Water white, in cases, gallon	.07½	.07½	.07½
Water white, in barrels, gallon	.14½	.14½	.14½
Water white, in cases, gallon	.17.90	.17.90	.17.90

LOS ANGELES EXPORT PRICES

	July 8		July 1		June 24	
Kerosene:						
Water white	.04	.04½	.04	.04½	.04	.04½

CRUDE OIL PRICES

July 1.—Magnolia Petroleum Co. advanced price for Luling, Tex., crude 25 cents.

July 1.—Sinclair Crude Oil Purchasing Co. announced it would run and pay for only 50 per cent of the average output from the wells to which it was connected, storing the remaining 50 per cent. Prairie Oil & Gas Co. announced it would confine its purchases to the amount of its shipments.

July 7.—The Joseph Seep Purchasing Agency reduced prices for Bradford and Allegany, Pennsylvania crudes 50 cents and other Pennsylvania crudes 25 cents. Cabell and Somerset medium were reduced 10 cents and Somerset light was reduced 15 cents. Ohio Oil Co. reduced prices for Lima, Indiana, Illinois, Princeton, Plymouth and Waterloo crudes 10 cents.

July 8.—Paragon Development Co. reduced price for crudes in Cumberland and Monroe Counties (Ky.) 15 cents.

July 8.—Humble Oil & Refining Co. reduced price both grades Gulf Coast crude, Mexia, Powell and Cosicana light 25 cents.

Arkansas and North Louisiana

Caddo, 38° and above	$1.85
35° to 37.9°	1.75
32° to 34.9°	1.65
Below 32°	1.50
Homer, 35° and above	1.85
33° to 34.9°	1.75
31° to 32.9°	1.65
Below 31°	1.50
Haynesville, 33° and above	1.75
Below 33°	1.65
El Dorado, 33° and above	1.85
Below 33°	1.75
Bull Bayou, 38° and above	1.80
35° to 37.9°	1.65
32° to 34.9°	1.50
Cotton Valley	1.00
De Soto	1.85
Crichton	1.65
Bellevue	1.75
Smackover, 26° and above	1.20
25° to 25.9°	1.05
24° to 24.9°	.95
Below 24°	.85
*Stephens, Ark.:	
Below 23°	1.00
23° to 25.9°	1.20
26° to 27.9°	1.35
28° to 31°	1.40

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo.)	$1.70
Salt Creek	1.60
Big Muddy	1.50
Mule Creek	1.10
Grass Creek (light)	1.95
Elk Basin	1.95
Lance Creek	1.90
Osage	1.90
Cat Creek (Mont.)	1.95
Sunburst, (Mont.)	1.05
Lost Soldier	1.28
Greybull and Torchlight	1.90
Hamilton Dome	1.55

Lander based on contracts covering entire production of fields.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted below:

Below 30°	$1.25
30° to 32.9°	1.45
33° to 35.9°	1.75
36° to 38.9°	2.00
39° and above	2.25
Magnolia Petroleum Co.:	
Below 28°	.90
28° to 30.9°	1.00
31° to 32.9°	1.10
33° to 35.9°	1.35
36° and above	1.50
Corsicana Light	1.50
Corsicana Heavy	.90
Mexia	1.50
Currie	2.25
Powell	1.75
Thrall	1.00
Humble Oil & Refining Co.:	
Corsicana Light	1.75
Mexia	1.75
Powell	1.75
Currie	2.00

Gulf Coast

Grade "A"	$1.75
Grade "B"	1.45
Luling	1.00
Laredo	.75
Milam County	1.35
Rockdale-Minerva (Milam County)	1.60
Above 39° gravity	1.80
Calliham (Live Oak-McMullen)	1.68½

California

14° to 14.9°	$1.00
20° to 20.9°	1.01
21° to 21.9°	1.02
22° to 22.9°	1.03
23° to 23.9°	1.05
24° to 24.9°	1.07
25° to 25.9°	1.10
26° to 26.9°	1.13
27° to 27.9°	1.16
28° to 28.9°	1.19
29° to 29.9°	1.22
30° to 30.9°	1.25
31° to 31.9°	1.28
32° to 32.9°	1.31
33° to 33.9°	1.34
34° to 34.9°	1.37
35° gravity and above	1.40

Eastern States

Penna Grade Oil in New York Transit Lines	$3.25
Bradford District Oil in National Transit Lines	3.25
Penna Grade Oil in National Transit Lines	3.00
Penna Grade Oil in Southwest Pa. Pipe Line Lines	3.00
Penna Grade Oil in Eureka Pipe Line Lines	3.00
Penna Grade Oil in Buckeye Pipe Line Lines	3.00
Cabell Grade Oil in Eureka Pipe Line Lines	1.60
Corning Grade Oil in Buckeye Pipe Line Lines	1.90
Somerset Medium Oil in Cumberland Pipe Line Lines	1.70
Somerset Light Oil in Cumberland Pipe Line Lines	1.85
Ragland Grade Oil in Cumberland Pipe Line Lines	1.00
Lima	2.18
Wooster	2.00
Illinois	1.97
Indiana	1.98
Princeton	1.97
Plymouth	1.35
Waterloo	1.45
†Oil Springs, Canada	2.75
†Petrolia, Canada	2.68
*Western Kentucky, 36° and above	1.75
*Western Kentucky, 33° to 35.9°	1.65
*Western Kentucky, 32.9° and below	1.55
Cumberland and Monroe Counties, (Ky.), (Paragon Dev. Co.)	1.85

†Plus Government bounty of 52½c.

*Prices for Warren, Allen, Hancock and Ohio Counties by Indiana Refining Co. Prices for Warren and Simpson Counties by Paragon Development Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)	$1.40
†Panuco (f.o.b. Mexican ports)	1.13
Tuxpam (New York)	1.97
Panuco (New York)	1.57

*Plus 31.92c tax. †Plus 17.40c tax. Prices based on contracts.

Production and Consumption in Japan

Petroleum Division, Department of Commerce, Research Investigator Summarizes Present Oil Situation in Empire

By Charles E. Kern

WASHINGTON, July 7. — A great deal of highly imaginative statement has done much to confuse the public mind in respect to Japanese petroleum resources. When the great earthquake of last year worked havoc at Tokio and its vicinity there were wild rumors of a loss of 50,000,000 barrels of fuel oil by the Japanese Government. This exaggerated statement created quite a furor in the American oil industry because it was supposed that Japan would at once be in the market to replace this vast quantity of oil lost in the disaster. As pointed out in The Oil and Gas Journal at that time, so far as the best informed sources of information in this country were concerned, Japan's oil storage facilities amounted to about 8,000,000 barrels which was the most reliable information as to the probable amount of oil that could possibly have been lost. Assuming that this storage was filled, the loss must have been vastly less because while the bulk of the storage tanks were at Tokio and vicinity a portion of them were in scattered locations. Probably the lack of information about Japan's petroleum at that time had a large influence in causing the Department of Commerce to delve into an investigation of the facts.

Buys $13,000,000 From U. S.

In 1923 the United States exported to Japan and her colonies a total of 152,000,000 gallons of petroleum products valued at over $13,000,000. It is believed that this market will continue to be a most important one for American export petroleum as consumption in Japan continues to grow while production is diminishing. Aside from any information that has been gathered by the Department of Commerce the writer has come into contact with opinions of men who are particularly familiar with the Japanese situation who have wondered whether Japan is following the same policy believed to control British statesmen of purchasing her oil supplies so long as that can be done on any reasonable basis and reserving her own resources against the day of diminishing or vanishing petroleum.

The reason for adopting this policy can readily be understood. It is only necessary to visualize world conditions both in respect to the navies of the world and the merchant marine to see what would face the leading nations, some with ample petroleum supplies and others practically exhausted. This phase of the petroleum situation is one that has long been discussed and it is likely to be a more lively subject for statesmen in the coming years than it is today. Even as the case now stands there have been hints from men in the public service in this country that there should be a check on the exportation of gasoline and fuel oil with a conservation policy looking to our own national needs in the future.

The export statistics of the United States and the Dutch East Indies, the principal forces of supply of the petroleum for Japan, have been freely used in the compilation of this work. But the greater portion of the material gathered has been through original research.

Offers Immediate Market

The Japanese Empire, including Formosa and Korea, the leased province of Kwantung and the southern half of Sakhalin Island is, with its total population of 80,000,000, an annual market for about 20,000,000 gallons of gasoline and other light petroleum products, over 90,000,000 of illuminating oil, gas and diesel oils, more than 25,000,000 gallons of lubricating oil and 200,000,000 pounds of solid petroleum products such as paraffin wax, candles, vaseline, pitch and asphalt. Of the above mentioned quantities the imports from foreign countries, principally the United States or the Dutch East Indies, were valued at over $3,000,000 for 1923 and supply about 50 per cent of the demands for refined liquid products and approximately 35 per cent of the solid products of petroleum. The balance of the trade is taken care of by the output of the Japanese refiners which have as raw material about 2,000,000 barrels of locally produced crude petroleum in addition to a constantly increasing amount of imported crude which totaled about a half million barrels in 1922 and approximately 1,000,000 barrels during 1923.

The local production and refining is entirely in the hands of Japanese concerns, principally the Nippon Oil Co., while the distribution or marketing of products is shared by this Japanese firm with several American companies and a British-Dutch company. It is believed that the reconstruction needs of Japan will prevent any large development of her oil production and refining industry until that country has recouped from her recent catastrophe.

The result of this investigation is the conclusion that there is no particular territory in the Japanese Empire that stands out as a petroleum reserve or a great prospective oil field. Future development will undoubtedly be carried on in the present known petroliferous areas that have been defined. Recent surveys and trial wells have appeared to justify this view as they have been largely disappointing.

Production Small

Petroleum has been actually found at places beyond the present fields but the deposits have proved to be too small for commercial exploitation. It is fairly evident, Mr. Coumbe concludes, that most of Japan's prospective production will be gained from the present proven fields or from areas in their immediate vicinity. In other words, Japan's future local supply of oil will be a question of the most extended adoption of modern drilling methods in order that deeper deposits may be more effectively worked, of carrying on extensive surveys by experienced petroleum geologists and of wildcatting on a larger scale than has been the practice of the Japanese companies in the past.

The Japanese Government has been making surveys of likely territory especially in the northern part of Hohnsu and in Japanese Sakhalin, but the results of these investigations have been discouraging. It is understood commercial petroleum has been found along the east coast of Sakhalin Island, but this fact is apparently of no great significance to Japan as this territory probably will be returned to Russia.

The Japanese Navy, working through the Nippon and Hoden Oil companies, tried out several places in southern Taiwan but only small wells were brought in and they soon went dry and had to be abandoned. At present the Japanese navy has suspended all prospecting and trial drilling in these fields, apparently deterred by the small showings made.

Over Billion Barrels Potential

Not many foreign geologists have had the opportunity of making extensive surveys of Japan's oil fields, so consequently few estimates of the possible petroleum reserve of this country are available. Dr. J. Morgan Clements, who has been over the ground, mentions in a paper entitled "The Petroleum Resources of Japan," read before the 125th meeting of the American Institute of Mining and Metallurgical Engineers held in February, 1922, that the recoverable mineral oil in the proven, probable and additional possible ground of the Japanese Empire totals up to 1,100,000,000 barrels. Dr. David White, of the United States Geological Survey, writing in "Oil Engineering and Finances" (London) for December 23, 1922, believes "that the oil recoverable by present methods in the Japanese Empire amounts to from 1,000,000,000 to 1,400,000,000 barrels."

There are a number of companies producing oil in Japan, but the Nippon Oil Co., Ltd., is the only one of importance, it having control of about 90 per cent of the production of the present time. This company, with a capitalization at this time of $40,000,000, of which $25,000,000 is paid up, controls about 58,000 acres of proven and 387,000 acres of prospective proven land. These are located in all of the main productive areas. The company produces about 5,000 barrels of petroleum daily from approximately 3,500 wells. That production was 1,837,000 barrels of crude petroleum in 1922 and the 1923 output has been estimated at 1,620,000 barrels.

Nippon Oil Co. Leads

The Nippon Oil Co. does all of the petroleum work in the petroleum area reserved for the Japanese navy. Some drilling has been carried on in Sakhalin and, although it is known that some oil is found, a report covering this exploitation has not been made public.

The Nippon interests are also the largest refiners and distributors of petroleum products in the Japanese Empire. Recently this company started the importation of foreign crude for refining in its plants.

There are numerous other companies engaged in the production of petroleum in Japan, but their operations are on such a small scale that they are relatively unimportant.

The recent mining regulations which superseded those of 1890 were published by Imperial order March 7, 1905, and became effective in that year. Under this law all minerals in situ are state property and only Japanese subjects and juridical persons constituted conformedly to the laws of the empire may acquire mining rights.

Japan has a petroleum refining industry that furnishes approximately 50 per cent of the national demand for liquid petroleum products such as gasoline, kerosene, etc., and about 65 per cent of the requirements for solid products such as paraffin, candles, asphalt, etc. These refineries have a daily capacity for handling over 13,000 barrels of crude. The refinery technique rather closely follows the method used in the United States. Cracking processes have recently been adopted. The refineries running on Japanese crude are located in the petroleum producing area and are supplied by short pipe lines. The crude available to these refineries amounts to about 2,000,000 barrels annually from the local fields in addition to 1,000,000 barrels of foreign crude at the present rate of importation. The source of most of the foreign crude in previous years has been the Dutch East Indies, but in 1923 the Japanese importing companies purchased about half of their requirements in California. The importation of foreign crude or refining in Japan has been the result of a gradual falling off in the yield of the Japanese field in the face of an increasing market demand.

Use Natural Gasoline

Formerly little use was made of the gas produced along with petroleum and it was allowed to go to waste as in many of the oil fields throughout the world. At present, however, some of this gas is piped to nearby towns where it is used for heating buildings, as fuel in factories and power stations. The Nippon Oil Co. is now extracting gasoline from natural gas.

Japan and her dependencies with a total population of 80,000,000 makes an annual market for over 140,000,000 gallons of gasoline, kerosene, lubricating oil and other liquid petroleum products in addition to about 200,000,000 pounds of paraffin, candles, vaseline, asphalt and pitch.

The consumption of kerosene in Japan

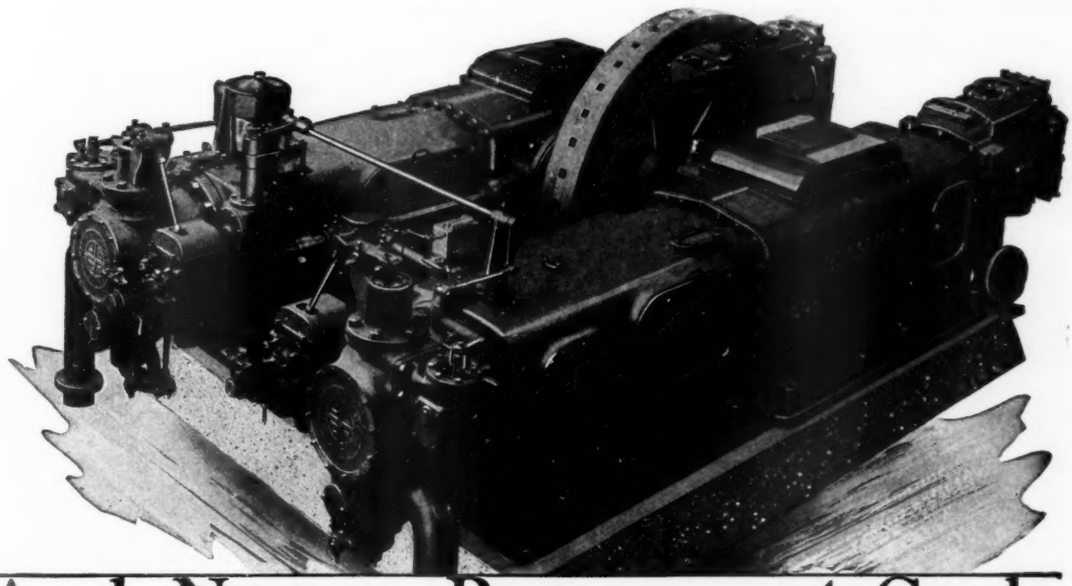
(Continued on Page 133)

INVESTIGATION FROM ORIGINAL SOURCES

The conditions in Japan in respect to petroleum deposits, production, refining, imports and exports, have been largely enveloped in mystery until these subjects were taken up by the petroleum division, Department of Commerce, and given a very full investigation.

Mr. Julius Klein, director, was early in recognizing the importance of these subjects and he had the good fortune to have available the services of Albert T. Coumbe, Jr., who took charge of the research work of the Far Eastern countries. Investigation from original sources supplemented by the field experience of Mr. Coumbe, who has spent a number of years in the Orient engaged in the marketing of petroleum products, has resulted in this very important addition to knowledge concerning Japan.

Albert T. Coumbe, Jr.



And Now a Bessemer 4-Cycle Gas Engine Compressor

IN order to be prepared for every possible compressor requirement Bessemer engineers have developed, perfected and now offer to the oil and gas industry this new Type FC-1 Direct Gas Engine Driven Compressor of the Four-Cycle type.

In adding this four-cycle unit to the Bessemer line it was with the determination to build a better four-cycle compressor than any that had been previously constructed. The type FC-1 was designed and fabricated to assure Bessemer the same leadership in the four-cycle field that Bessemer equipment has held in the two-cycle field for twenty-eight years. All Bessemer products must be the best!

Experienced four-cycle engineers designed this new unit, incorporating the latest refinements in advanced engineering, while the high Bessemer standards of materials and workmanship are maintained throughout.

For use where a four-cycle unit is preferred there is no better equipment than the Bessemer Type FC-1. Compare it in every detail with others—your own conclusions are bound to be that the Bessemer is Best.

Let us send you complete details. Write for our illustrated bulletin describing the new FC-1.

Send for this booklet. It illustrates and describes the new Bessemer Type FC-1 in detail. A post card will bring one by return mail—and there is no obligation.

THE BESSEMER GAS ENGINE COMPANY
52 YORK STREET GROVE CITY, PA.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

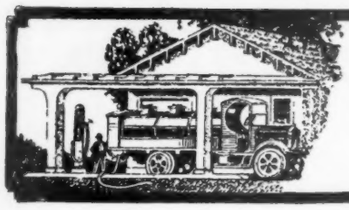
paraffin wax, candles, vaseline, pitch and asphalt. Of the above mentioned quantities the imports from foreign coun-

ing methods in order that deeper deposits may be more effectively worked, of carry-

Co., Ltd., is the only one of importance, it having control of about 90 per cent of

The consumption of kerosene in Japan

(Continued on Page 133)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, July 8

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
†100 gals or more	15.25	...	19.0	2.0
Decatur, Ill.	17.2	...	19.2	12.5
East St. Louis	15.1	...	19.35	11.1
Joliet	18.4	...	20.4	12.7
Peoria	18.2	...	20.2	12.5
Quincy	16.2	...	18.2	11.3
Davenport, Ia.	15.5	...	20.5	12.9
Des Moines	16.0	...	18.5	12.9
Keokuk	16.5	...	18.5	12.9
Sioux City	15.0	...	18.0	12.5
Duluth, Minn.	19.2	...	21.2	13.6
Minneapolis	12.0	...	16.0	13.6
La Cross, Wis.	19.2	...	21.2	13.4
Milwaukee	16.1	...	19.1	12.3
Madison	18.3	...	20.3	12.5
Detroit, Mich.	18.8	...	20.8	13.2
Grand Rapids	18.7	...	20.7	13.1
Saginaw	18.9	...	20.9	13.3
Evansville, Ind.	20.0	2.0	22.0	12.5
Fort Wayne	20.4	2.0	22.4	12.9
Indianapolis	20.2	2.0	22.2	12.7
South Bend	20.4	2.0	22.4	12.9
Fargo, N. D.	18.8	1.0	20.8	15.6
Huron, S. D.	22.0	2.0	24.0	14.1
Sioux Falls	18.0	2.0	20.0	13.6
*Kansas City, Kans.	19.9	1.0	20.9	11.3
Springfield	17.8	...	19.8	12.2
*St. Louis	15.6	0.5	18.9	12.0
*St. Joseph	16.0	0.5	18.0	11.9
Wichita, Kans.	15.3	...	19.8	11.8
Bartlesville, Okla.	18.4	2.5	21.4	10.9

*City tax.
†Tank wagon price on less than 100 gallons, 18c.

Tank wagon prices on April 10, 1922, g. up 1½c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c; k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 0.6c; Oct. 4, k. down 1¼c; Nov. 10, g. down 1 4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c, k. 1c.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Newark, N. J.	19.5	...	....	14.0
Atlantic City	19.5	...	....	14.0
Annapolis, Md.	21.0	2.0	24.0	13.5
Baltimore	21.0	2.0	24.0	13.5
Cumberland	21.0	2.0	24.0	13.5
Washington, D. C.	21.0	2.0	25.0	13.5
Norfolk, Va.	22.0	3.0	24.0	14.0
Petersburg	22.0	3.0	24.0	14.5
Danville	22.0	3.0	24.0	14.5
Richmond	22.0	3.0	24.0	14.5
Roanoke	22.0	3.0	24.0	14.5
Keyser, W. Va.	21.0	2.0	....	14.5
Charleston	21.0	2.0	....	14.5
Parkersburg	21.0	2.0	....	13.0
Wheeling	21.0	2.0	....	14.5
Charlotte, N. C.	22.0	3.0	....	14.5
Hickory	22.0	3.0	....	14.5
Mt. Airy	22.0	3.0	....	14.5
Salisbury	22.0	3.0	....	14.5
Charleston, S. C.	22.0	3.0	....	13.5
Columbia	22.0	3.0	24.0	14.5

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Atlanta, Ga.	20.0	3.0	24.0	14.0
Augusta	22.0	3.0	24.0	14.5
Macon	22.0	3.0	24.0	15.5
Savannah	20.0	3.0	22.0	14.0
Birmingham, Ala.	20.0	2.0	22.0	15.5
Mobile	19.0	2.0	21.0	13.5
*Montgomery	21.0	3.0	23.0	16.5
Clarksdale, Miss.	20.0	3.0	22.0	14.0
Jackson	20.0	3.0	22.0	10.0
Natchez	19.5	3.0	21.5	13.5
Vicksburg	19.5	3.0	21.5	13.5
Jacksonville, Fla.	20.0	3.0	22.0	14.0
Miami	22.0	3.0	24.0	15.5
Pensacola	20.0	3.0	22.0	14.5
Tampa	20.0	3.0	22.0	14.0
Lexington	23.0	3.0	25.0	15.0
Covington, Ky.	23.0	3.0	25.0	15.0
Louisville	22.0	3.0	24.0	14.0

*In addition to State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
San Francisco	17.0	2.0	20.0	15.5
Los Angeles	16.0	2.0	19.0	15.5
Fresno	17.5	2.0	20.5	17.5
Reno, Nev.	16.5	2.0	23.5	19.0
Portland, Ore.	19.0	3.0	22.0	16.5
Seattle, Wash.	18.0	2.0	21.0	16.5
Tacoma	18.0	2.0	21.0	16.5
Spokane	22.0	2.0	25.0	20.5
Phoenix, Ariz.	23.0	3.0	26.0	21.5

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Albany, N. Y.	20.0	...	22.5	14.0
*New York	20.0	...	23.0	14.0
Buffalo	16.5	...	19.5	14.0
Rochester	17.0	...	21.0	13.0
Syracuse	19.5	...	22.0	12.0
Boston, Mass	18.0	...	21.0	14.0
Providence, R. I.	20.0	...	23.5	14.0
Augusta, Me	20.0	1.0	22.5	14.0
Manchester, N. H.	20.0	2.0	22.5	14.0
Burlington, Vt.	20.0	1.0	22.5	14.0

*Price in steel barrels.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Denver, Colo.	19.0	2.0	21.0	13.5
Greenwood Spgs.	23.0	2.0	....	17.5
Pueblo	19.0	2.0	21.0	14.5
Billings, Mont.	21.5	2.0	23.5	14.5
Butte	23.0	2.0	25.0	15.0
Great Falls	23.0	2.0	25.0	16.0
Helena	23.0	2.0	25.0	16.0
Miles City	22.5	2.0	24.5	15.5
Boise, Idaho	24.5	2.0	26.5	20.0
Salt Lake, Utah	24.0	2.5	26.0	17.5
Ogden	24.0	2.5	26.0	17.5
Basin, Wyo.	20.0	1.0	....	14.0
Casper	18.0	1.0	20.0	12.0
Cheyenne	19.5	1.0	21.5	13.5
Cody	21.0	1.0	....	15.0
Lander	20.0	1.0	....	14.0
Albuquerque, N. M.	22.0	1.0	24.0	16.5

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
*Pittsburgh, Pa.	20.0	...	25.0	14.0
*Philadelphia	20.0	...	25.0	14.0
*Scranton	20.0	...	25.0	14.0
*Allentown	20.0	...	25.0	14.0
*Altoona	20.0	...	25.0	14.0
Dover, Del	22.0	2.0	25.0	14.0
Wilmington	22.0	2.0	25.0	14.0
Providence, R. I.	20.0	...	23.0	14.0
Springfield, Mass	20.0	...	23.0	14.0
Worcester	20.0	...	23.0	14.0
Boston	20.0	...	23.0	14.0
Hartford, Conn.	21.0	1.0	24.0	14.0
New Haven	21.0	1.0	24.0	14.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
All Ohio Points.	19.0	...	21.0	15.0

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Dallas, Tex.	14.0	1.0	18.0	10.0
Fort Worth	14.0	1.0	17.0	11.0
Houston	16.0	1.0	19.0	12.0
San Antonio	16.0	1.0	19.0	10.0
El Paso	16.0	1.0	18.0	17.0
Muskogee, Okla.	16.0	2.5	21.0	11.0
Oklahoma City	16.5	2.5	21.5	11.0
Tulsa	16.0	2.5	21.0	11.0
Ft. Smith, Ark.	18.0	4.0	20.0	12.0
Little Rock	22.0	4.0	25.0	13.0
Texarkana	21.0	4.0	24.0	12.0

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
New Orleans, La.	17.5	1.0	20.5	9.0
Alexandria	18.5	1.0	21.5	13.0
Baton Rouge	17.0	1.0	20.0	11.5
Lake Charles	18.5	1.0	21.5	13.0
Shreveport	18.5	1.0	21.5	13.0
Memphis, Tenn.	20.0	2.0	22.0	14.0
Chattanooga	20.5	2.0	22.5	14.5
Knoxville	21.5	2.0	23.5	15.0
Nashville	19.5	2.0	20.5	13.5
Bristol	22.0	2.0	24.0	15.5
Little Rock, Ark.	21.0	4.0	23.0	13.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Incids tax of	Gasoline Service station	Kero. Tank wagon
Omaha	13.0	...	15.0	12.5
Crawford	19.0	...	....	13.25
McCook	19.75	...	21.75	14.0
Norfolk	18.75	...	20.75	13.0
North Platte	19.75	...	21.75	13.75
Scotts Bluff	19.25	...	21.25	13.25

TANK WAGON CHANGES

June 30.—Continental Oil Co. reduced kerosene tank wagon prices in Denver and Colorado Springs, Colo., and all main marketing points in Wyoming 1 cent except at Cheyenne, where the reduction was 1.5 cents.

June 30.—Magnolia Petroleum Co. reduced gasoline service station price at El Paso 2 cents and kerosene tank wagon price 1 cent. Magnolia Petroleum Co. reduced gasoline tank wagon price 1 cent and service station price 2 cents at Fort Worth.

July 3.—Magnolia Petroleum Co. reduced gasoline tank wagon price 1 cent and service station price 2 cents at Houston.

Effective June 28 Standard Oil Co. of Indiana reduced gasoline tank wagon 1 cent at Minneapolis.

SEASONAL DULLNESS IN COASTAL MARKET

HOUSTON, Tex., July 7.—Refined products in the Houston district are going through the seasonal dullness, with the refiners somewhat divided between green pessimism and rosy optimism. One refiner complains that business is dull, in fact, he said "rotten." Another declares business is not so bad, with a fair amount of inquiries and orders, mostly domestic, showing up. All are united that the export business needs a crutch to limp along on.

Refiners with contracts up to 75 per cent of their output say some jobbers are writing and wiring to hold up shipments on their contracts on account of no more available storage.

But the present dullness, for it is generally conceded that the demand has slackened, is one that comes with the regularity of taxes in midsummer when zero lubes are not in demand except in the polar regions and the natives there still persist in using sledges rather than flivvers. One refiner has contracted his entire output of gas oil and that product is moving fairly steady.

IMPROVEMENT NOTED IN OIL CITY MARKET

OIL CITY, Pa. July 7.—With a considerable improvement in gasoline and kerosene demand and some upward revision of some of the prices for these particular products, the outlook for the refined industry in northwestern Pennsylvania has improved considerably during the past week.

The demand for gasoline is excellent, some state it is the best of the year. The motorists are using motor fuel in large quantities and this is, of course, reflected back on the refiner with the result that his sales are near record figures. The gasoline which has been kept in storage for some weeks is beginning to dwindle down. Some refiners have increased the price they are asking for gasoline while in the case of others it is firmer than it has been.

Kerosene has also shown considerable improvement. Prices have been advanced during the wek, in some cases as much as a quarter of a cent and the demand is much improved. Probably one factor that has an important bearing on this matter is the fact that some of the refineries in this district are now shut down.

There has been no change in fuel oil. Stocks look a little bit firmer and some refiners and brokers look for an early improvement. Naturals are no better than they have been. Wax is better both in demand and price.

MID-CONTINENT REFINERY OPERATIONS FOR WEEK ENDING JUNE 28

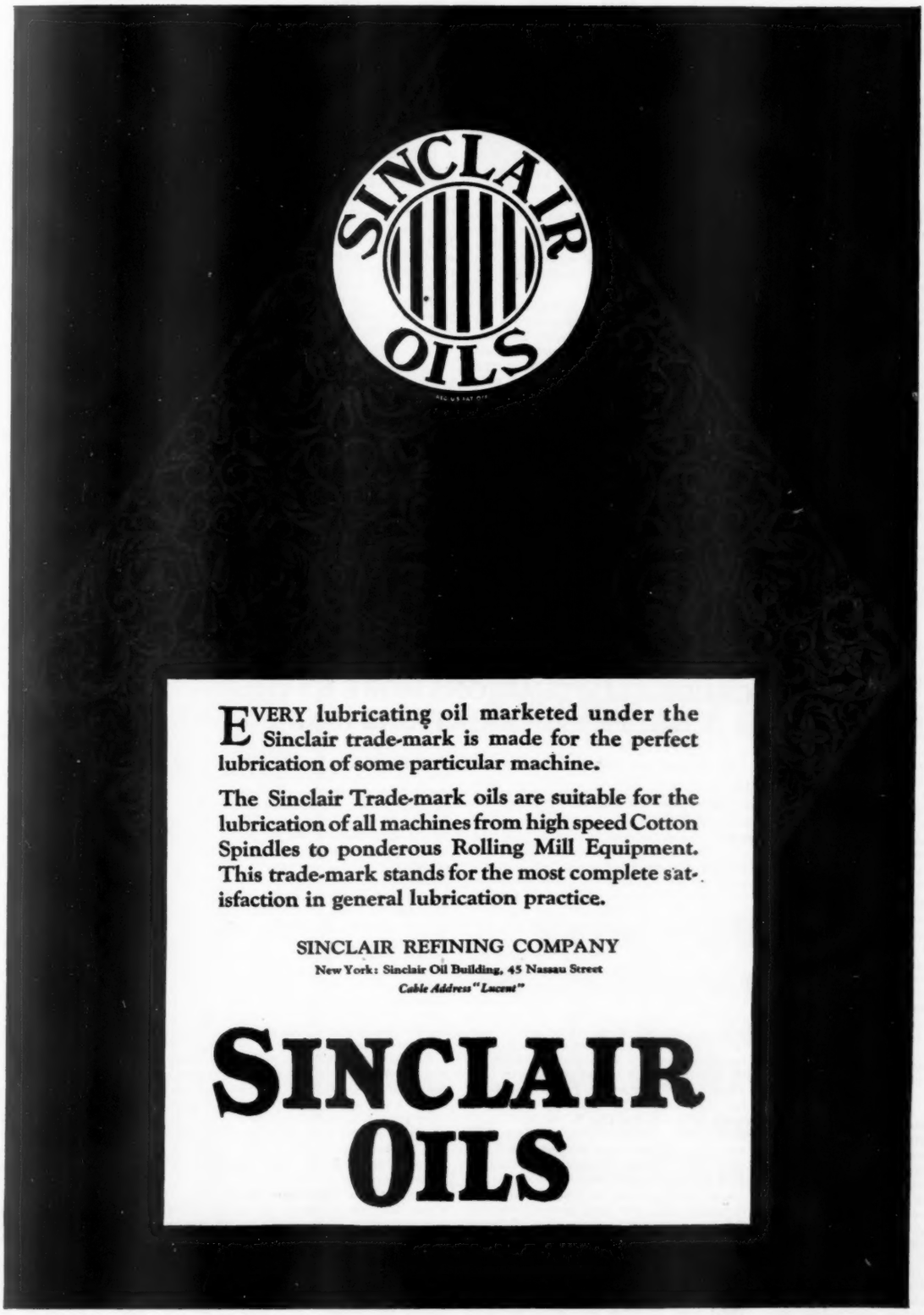
Gasoline stocks in the Mid-Continent showed a reduction of 6,290,378 gallons or 4.52 per cent during the week ending June 28, according to the regular weekly report from 141 refineries to the Western Petroleum Refiners Association. Total stocks on that date were 132,807,524 gallons. Kerosene stocks showed little change, a decrease of 125,747 gallons bringing the total down to 20,322,026 gallons. Fuel and gas oils also showed a decrease in stocks of 1,809,862 gallons or 1.75 per cent, dropping to a total of 101,865,354 gallons. Total oil run to refineries in the Mid-Continent dropped 32,452 bbls. or 1.69 per cent to a total of 1,887,970 bbls. The output of gasoline increased 1,593,461 gallons or 5.82 per cent to a total of 28,976,566 gallons, and shipments increased 26.06 per cent. Kerosene output increased 700,732 gallons or 12.10 per cent to a total of 6,492,310 gallons, and shipments increased 10.33 per cent. Gas and fuel oil output decreased 2,437,753 gallons or 6.95 per cent to a total of 32,627,269 gallons and shipments increased 4.39 per cent.

CONSOLIDATED STATEMENT COVERING ALL MID-CONTINENT REFINERIES FOR WEEK ENDING 7 A. M., JUNE 28, 1924

	Kansas	Oklahoma	North & Central Texas	North La. & Arkansas	Mid-Continent Total	June 21, '24	May 31, '24	May 3, '24
Number of refineries reporting	27	62	42	10	*141	*141	*140	144
Daily capacity (barrels)	102,600	265,700	105,550	25,000	498,850	498,850	482,850	537,400
Combined operations during week:								
Materials to stills (bbls.):								
Crude, item A	206,427	932,353	351,741	87,556	1,678,077	1,722,606	1,619,075	1,305,686
Others oils (see note), item B	37,503	103,619	54,571	14,200	209,893	197,816	221,720	356,403
Total	343,930	1,035,972	406,312	101,756	1,887,970	1,920,422	1,840,795	2,162,089
Output (gallons):								
Gasoline, item C	5,837,616	16,721,372	5,469,134	948,444	28,976,566	29,383,105	26,985,496	25,965,492
Kerosene, item D	1,072,072	3,896,706	1,210,750	312,782	6,492,310	5,791,578	5,928,918	6,023,984
Gas and fuel oil, item E	6,294,910	17,118,433	7,248,174	1,965,752	32,627,269	35,065,022	31,547,328	29,512,915
Stocks on hand at close of week:								
Materials for stills (bbls.):								
Crude, item J	668,466	4,322,620	1,208,015	831,935	7,031,036	6,986,437	7,279,968	7,686,633
Other oils (see note), item K	98,232	1,334,410	122,654	511,623	2,066,919	2,021,918	2,058,800	2,296,875
Finished products (gallons):								
Gasoline, item L	15,388,064	103,305,817	12,854,473	1,259,170	132,807,524	139,097,902	141,088,404	130,706,100
Kerosene, item M	3,781,602	11,337,084	5,104,810	98,530	20,322,026	20,447,773	16,756,701	22,659,401
Gas and fuel oil, item N	12,726,724	70,285,853	16,316,890	3,536,857	101,865,354	103,676,216	96,143,313	129,423,007

*Excluding Gulf Coast refineries.

Note: Other oils includes all oils other than crude which are either purchased or withdrawn from stocks and run to stills during the week. The total of items A and B is, therefore, the net quantity of materials consumed by the reporting refineries in producing the quantities of products shown as the result of the operations of the refineries during the week. Item K includes all stocks of oils other than crude held for further refining.



EVERY lubricating oil marketed under the Sinclair trade-mark is made for the perfect lubrication of some particular machine.

The Sinclair Trade-mark oils are suitable for the lubrication of all machines from high speed Cotton Spindles to ponderous Rolling Mill Equipment. This trade-mark stands for the most complete satisfaction in general lubrication practice.

SINCLAIR REFINING COMPANY
New York: Sinclair Oil Building, 45 Nassau Street
Cable Address "Lucent"

SINCLAIR OILS

Answer Agitation Against Curb Pumps

Declared Indispensable to Motorists and Industry and an Insurance Against Fire Risks in Handling Gasoline

By L. M. Fanning

Every once in awhile an agitation springs up for the removal of the curb pump, and at present there are such movements in various parts of the country. Those who closely follow the matter state that there is no particular organized movement. The agitation appears spasmodically and seems to spring out of the ether. It is stated that in most cases which have been investigated there seems to be practically no well defined motive behind the action except that some one gets the idea that "pumps should not be allowed at the curb." If no one happens to be on hand who is able to give some facts as to wisdom of the curb pump, a town or city is liable to pass an ordinance. The result of such action is usually the revocation or revision of the ordinance when the facts have been ascertained and the matter of a substitute method of filling the tanks of motor cars found to be a knotty question.

In Boston recently a bill was introduced in the House to prohibit the use of and to remove all existing pumps. It is understood that this bill was tabled indefinitely. In Bridgeport, Conn., a resolution was made in the City Council to remove all curb pumps from main thoroughfares, but after thorough discussion it was voted not to adopt it. A similar thing happened in New Rochelle, N. Y., where agitation was started looking to the removal of all pumps from the curb. After going into the question, it was decided to table the matter indefinitely.

Buffalo, N. Y., had a strenuous outbreak against the curb pump. The case was carried through three courts with the Supreme Court finally finding no sufficient reason for granting a writ of mandamus which had been applied for, calling for the removal of curb pumps. Press dispatches from New Orleans, La., indicate that pumps are due for removal there. There is indication, however, that a reaction against the agitation has set in which will result in the revision or revocation of the existing ordinances. The subject was also agitated in Plainfield, N. J., but no action was decided upon. These are a few of the instances of agitation against curb pumps.

Economical Distribution

It is pointed out that those familiar with the oil business readily realize the indispensability of the curb pump to the economical distribution of gasoline. It has been, and still is, the main reason for the oil marketers' ability to keep gasoline distribution in step with the rapid advance in the use of automobiles. Any interference to this means of distribution by local or general legislation would create a serious situation for the oil industry, and whenever this agitation takes on anything that looks like a general movement it is something that requires prompt action on the part of the industry in the matter of giving the facts.

The reasons usually advanced for the removal of curb pumps are the illegality of transacting private business on public property and the obstruction to pedestrains and street traffic. In some cases it has been intimated that curb pumps are a blemish to the city and hazardous.

As regards the argument that curb pumps mean the carrying on of private business on public property it is pointed out that trolley companies, bus lines and other such enterprises are public conveniences and as such are granted franchises to operate on public property. The serving of gasoline to motorists from the curb is cited as no less a public convenience and, further, it grows more so each year with the multiplying number of automobiles and the increasing dependence of the public upon this means of conveyance.

No Obstruction to Traffic

As far as obstruction to traffic is concerned, investigation has disclosed that curb pumps offer far less restriction to traffic than the permissable parking of cars along the curbs of city streets and that the pumps themselves offer no more obstruction to pedestrians on the sidewalks than watering troughs, fire hydrants, telegraph and telephone poles, trees, hitching posts and other such objects, the location or desirability of which are unquestioned.

It is recognized that supervision by properly constituted city authorities as to the location and installation of curb pumps is desirable; that promiscuous establishment and use of these pumps any and everywhere should not be permitted. But with proper supervision, those who have made a study of the question believe the curb pump is filling an essential need and that the extreme of legislating the curb pump out of existence, or attempting to do so, is not justified and its accomplishment would be disastrous, not alone to the oil industry, but to the motoring public.

As one authority sums up the situation: "The whole subject is really not so much a matter of what will we do with curb pumps as it is what will we do without them." The distribution cost of any article always finds its way into the selling price. A curb pump completely installed with tank costs approximately $400. The cost of a filling station ranges anywhere from $5,000 to $100,000. The upkeep of the curb pump is practically nil. The upkeep of the filling station is large. The great increase in the number of filling stations in this country has been a subject of much discussion from the angle of overbuilding and cost of maintenance as entering into the price of gasoline. In fact, there has been agitation to the effect that there are too many filling stations. If the curb pump were banished, the alternative appears to be the filling station, and, if this is to be accepted, the high cost of no curb pumps becomes immediately apparent and, in addition, there is already agitation on the ground of economics against the alternative.

Safest Delivery

As regards the curb pump being hazardous, the executive committee of the National Fire Protection Association has rendered the following opinion: "It is the opinion of the National Fire Protection Association as expressed by its executive committee that where motor vehicles are to be supplied with liquid fuel in the street a fixed pump at the curb is the safest and most efficient means of delivering such supply, and the association, from the standpoint of fire hazard, favors the general installation and use of such pumps under proper supervision as to location."

The agitation last year against curb pumps reached such proportions that the matter was called to the attention of the National Fire Protection Association. It was pointed out by representatives of the oil industry that the sidewalk pump gives the greatest measure of protection, as cars may be filled in the open and gasoline delivered through tight connections from the tank in the ground to the tank in the car. It makes it possible to carry on the operation of filling cars in cities and towns, outside of insurable property, and in the open where any escape of vapor, such as would take place from the venting of the tank in the car is quickly and harmlessly dissipated.

Wherever unfavorable action has been taken in regard to the use of these pumps, gasoline portables or cans or both have been substituted, neither of which, it is contended, is as safe as the pump for street use. There is danger of the container tipping over and there is involved the frequent handling of the container. Another arrangement intended to meet the situation is to place the pump back on the property line and swing a pipe arm across the sidewalk.

Fire Prevention View

A discussion of the subject from the angle of fire prevention sets forth the following view: "At the present time some 15,000,000 motor vehicles are operating on streets and highways of our country. Every one of these vehicles requires a supply of gasoline at frequent intervals. Last year approximately 5,500,000,000 gallons of gasoline were transferred from storage tanks to automobile tanks through gasoline pumps. The handling of such an enormous quantity of this hazardous fluid is a matter of no small importance in fire prevention matters, and as no other means as safe and practical as the curb pump has been devised to accomplish this work, there is grave danger in eliminating these instruments as units of gasoline distribution. "The curb gasoline pump of today is a safe, quick and accurate method of delivery. There is no exposure of gasoline. The fluid is pumped through tight connections from underground storage tanks into the tanks of automobiles.

"The frequent agitation for the removal of gasoline pumps from the curb indicates a fertile field for reliable information regarding the service these instruments render," says W. W. Townsend, manager of the advertising division, general sales department, of the Gilbert & Barker Manufacturing Co. "Sometimes we have wondered if a little thinking on 'the high cost of no curb pumps' would not be enlightening.

"For the past decade the curb has been one of the mainstays in gasoline distribution. It has aided in maintaining a distribution so efficient, so thorough, and so flexible that the rapidly expanding needs of the increasing number of motorists have been easily supplied. It has earned its place as a national institution—a symbol of gasoline supply which every autoist recognizes and uses.

"There can be no substitute for the service of curb pumps installed in properly selected locations. If such a necessary part of our dispensing system were abolished, the high cost of no curb pumps would make itself apparent in increased cost of distribution, waste of time, greater inconvenience, and increased fire hazards.

Time Saving Too

"We have yet to find the motorist who, going anywhere or not, is not in a hurry when it comes to filling his 'gas' tank. The time element seems paramount. To stop at the curb pump requires the least possible time, and offers the quickest and easiest means of completing the transaction to the satisfaction of all con-

(Continued on Page 136)

CRUDE FLUCTUATIONS MORE EXTREME THAN PRICE VARIATIONS IN GASOLINE

In his paper on "The Economies of the Oil Industry," part of which was published in The Oil and Gas Journal last week, Sir Robert Waley-Cohen, speaking before the petroleum section of the Empire Exhibition at London, said that neither the price of crude oil nor the price of refined oil bears the same systematic relationship to the cost of production as is the case with ordinary commodities. The normal tendency is for the price or value of a commodity to correspond with what is called its marginal cost of production—that is, with the "cost of production of that part of the annual output which is wrested with most difficulty from the lap of nature." In the case of crude oil, the producer has to take into account certain indirect and nontangible elements in order to arrive at the real marginal cost of production. An American economist has given the following analysis of the operating costs of a representative company in the Mid-Continent Field: Direct lifting expense 22.5 per cent, depletion of property 18.5 per cent, depreciation of physical equipment 15.6 per cent, nontangible development expense 14.55 per cent, dry holes and abandonments 13.2 per cent, general expense 6.4 per cent, year's proportion of bonus 5.13 per cent, rentals of undeveloped acreage 4.12 per cent. Of course these proportions vary enormously in different fields.

For instance, most of the £8,000,000 spent some 15 years ago in the endeavor to develop an oil field at Maikop, in Russia, was completely lost, as the field proved to be of no commercial value, The experience gained was no doubt great, has been of value to those who undertook the experiment, and may assist very largely in diminishing the costs of repeating the same experiments in other fields; but the failure in Maikop must be regarded as part of the cost of developing oil production in other fields that have profited by the experience gained in Maikop. And similarly every great oil organization is constantly making cost experiments in the search for oil, the expense of which must be charged to their general operations if they are to show an ultimate profit and thus to receive the confidence necessary to secure the capital without which the industry could not be carried on. But even apart from these large and incalculable sums, which would have to be taken into account in any attempt to estimate the cost of oil production, there are smaller variations which render any such calculation futile.

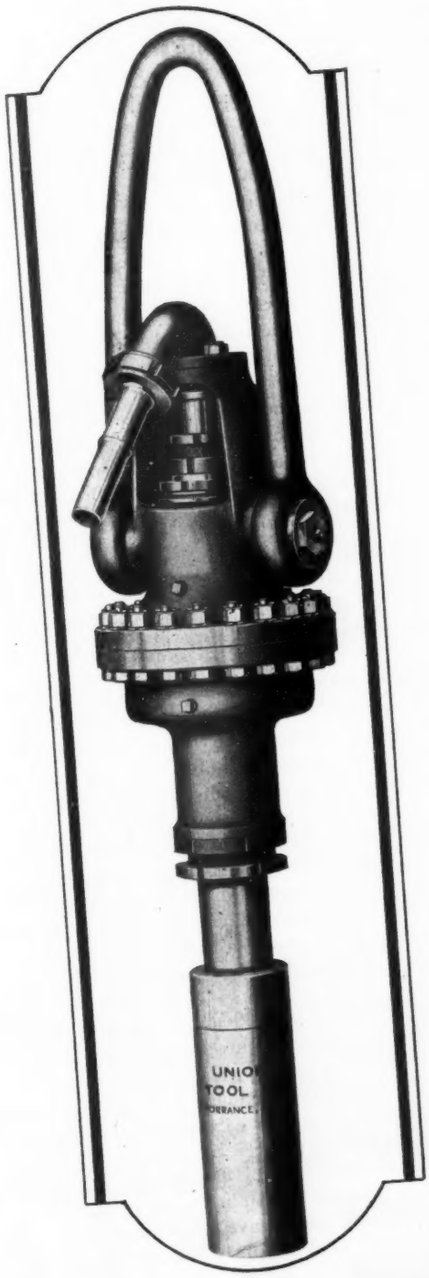
Similarly, the price of refined oils bear no systematic relation to the marginal costs of manufacture. The products which a refiner may obtain from the stills vary greatly according to the composition of the crude oil and the method of refining. Where fluctuations are so great it is, perhaps, a questionable expedient to utilize averages at all.

Crude Fluctuates More

An analysis of some oil price cycles was next given, to elucidate the point that the oscillations in the prices of crude oil are more extreme than in those of all commodities averaged and are much more extreme than in those of gasoline. This brief analysis of oil price cycles (continued the author) will have shown in the first place that the law of supply and demand governs oil prices as all others; in the second place that the oscillations in the prices of crude oil are much more extreme than those in the

(Continued on Page 124)

IDEAL SWIVELS



RENDER CONSTANT SERVICE UNDER MOST SEVERE CONDITIONS

***

Type "GS" is manufactured in two sizes, for medium and deep drilling

NSCO THE NATIONAL SUPPLY COMPANIES NSCO

The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Weekly by
THE PETROLEUM PUBLISHING COMPANY
114-116 West Second Street
TULSA, OKLA.

Established as an International Publication in 1910 by Patrick C. Boyle.

President	Frank T. Lauinger
Vice President and General Manager	Robert W. Egan
Treasurer	H. J. Bryan
Secretary	W. T. Bryan
Editor	James McIntyre
Associate Editor	Andrew M. Rowley
Associate Editor	W. T. Anderson
Associate Editor	C. O. Willson
Advertising Manager	Clarence Morris
Circulation Manager	J. P. Mulkern

DISTRICT ADVERTISING OFFICES

30 Church Street, NEW YORK — 1328 Peoples Gas Bldg., CHICAGO, ILL.
PITTSBURGH, PA., 1003 Jones-Law Bldg.

TERMS OF SUBSCRIPTION
(By Mail, Postage Prepaid)

Single copies	$ .15	One year (in United States)	$6.00
Three months	$2.00	One year (in Canada)	$7.00
Six months	$3.00	One year (foreign countries)	$7.00

ADVERTISING RATES ON APPLICATION
Telephone: Osage 1930—Osage 7538
Remittances by Checks, Drafts, Express or Postal Money Orders should be made payable to
The Petroleum Publishing Company
Cable address, "Oilgasnal"

MEMBER AUDIT BUREAU OF CIRCULATION

A LOST OPPORTUNITY

The nation-wide publicity given by the newspapers to the cracking patent suit filed by the Attorney General against some 50 oil companies and the manner in which it was used to increase popular prejudice against the oil industry is a striking example of the industry's need for a publicity committee.

Newspaper readers of the announcement by the publicity representative of the Department of Justice caught the idea from the press reports that the oil business had been indicted for violating the Sherman anti-trust act.

As a matter of fact and law the suit is a civil suit. There has been no indictment, no criminal prosecution whatever. In fact, Attorney General Stone has since let it be known that there is very little probability of any criminal proceedings being instituted in connection with the suit.

The suit is simply a petition in equity such as common between individuals or corporations in a multitude of cases where a judicial determination of the legality of an action is sought.

Yet, because of the manner in which the announcement was broadcast without an accompanying statement from the defendants' side, the public is led to believe that the oil business has been "caught with the goods." It is already indicted and convicted and only awaiting sentence at Chicago in the minds of a large bulk of the people.

This unfortunate position could have been avoided if the industry had had a publicity committee authorized to speak for the industry and give out, simultaneously with the statement issued by the publicity bureau of the Department of Justice marked "Confidential: To be held in confidence until 11 a. m., Wednesday, June 25, when released for afternoon papers."

The only way to meet publicity is with publicity. Everybody is using it nowadays, everybody but the oil industry. Even the Government departments have their publicity representatives, their "confidential—to be held for release" announcements. Occupants of the White House itself have been known to rely upon timely and favorable publicity through chosen channels.

This is the spirit of the age—to get your case before the public. It need not be propaganda which is merely an imitation of genuine publicity. The plain truth, if you have a good case, is the best publicity always.

An active and aggressive publicity committee speaking for the oil industry would have been in position to have issued concurrently with the Department of Justice statement a specific and attention-compelling presentation of the other side of the suit in equity.

Of course, lawyers will say that such cases are not to be tried in the newspapers, but this is to ignore the facts of modern life. There is much more at stake than the legal issue in this case and the oil industry is suffering from failure to get the same publicity for its side as the Department of Justice.

Demagogs inside and out of Congress and the State legislatures will use this litigation and the charges filed by the Attorney General to intensify popular agitation against the industry. They will make it the basis for a campaign of misrepresentation and probably of destructive legislation against the oil business.

The filing of this suit and the manner in which it was given publicity calls for further effort by the industry to hasten the creation of a publicity committee that will tell the people the facts about the oil business.

For one thing the industrial and business world should be made to understand that it is not the patent rights of the oil industry alone that are involved. The imputation of monpoly may be applied to patent rights in any business. The prejudice created in the popular mind may just as readily be directed against any other industry.

The railroads used to be the political target, then the packing industry, the woolen industry, the lumber industry, the coal industry. Just now it is oil that drives a national convention to frenzy and sets the public by the ears.

The daily papers and the motor magazines are playing up this suit for a sensation. The politicians are using it to further their own ends. And the oil industry, the victim of it all, is being held up to popular opprobrium almost without a voice being raised in its behalf, so far as the channels of national publicity are concerned.

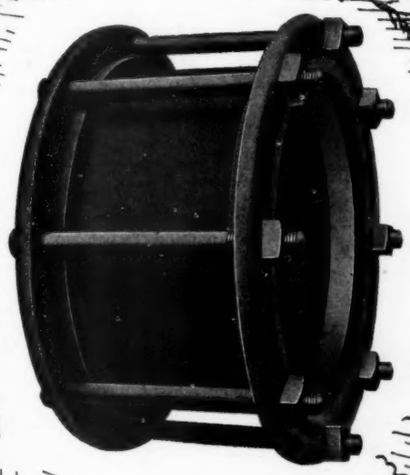
Yet we venture to say that there is a first class news story from the reader's standpoint in the history of these cracking processes and the making of these agreements, a story of untiring research into the mysteries of matter, of inch by inch conquest of the secrets of nature, of benefits to the world at large that would make the most fascinating sort of reading if properly presented.

How many of the 15,000,000 consumers of gasoline have any idea what a cracking process is? How few would fail to be interested in a readable explanation, in the revelation of what this process has meant to the marvelous development of the automobile and the maintenance of an abundant supply of the fuel essential to the individual transportation methods of today.

A capable committee of publicity, versed in the presentation of attractive information, could have counteracted the widespread misunderstanding of this case promptly and effectively.

While the Department of Justice and the oil companies are fighting out the legal points in the courts there is no reason why the general public should misconstrue the facts and be misled into further unwarranted denunciation of an industry whose achievements at home and abroad should be the pride of every American.

Dresser Couplings Dominate



The Dresser Company has been in business for forty years, and, during that entire period, has enjoyed the good will and patronage of the men engaged in the Natural Gas and Oil Industry.

Since their inception, Dresser Couplings have always dominated, and from the start have been regarded as standard equipment in Pipe Line construction.

Of the thousands of miles of high pressure natural gas trunk lines in use, it is conservative to say that more than 75% of those of plain end pipe are connected with Dresser Couplings.

S. R. DRESSER MANUFACTURING CO.
BRADFORD, PA., U. S. A.

2

DRESSER

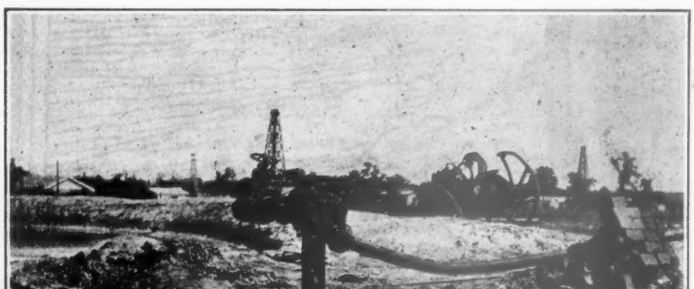
Big Oil Fire Extinguished With Water

Unique Method Successfully Used by the Tidal Oil Co. in Cromwell Field. Enormous Gas Fire Presented Difficulties

By C. D. Lockwood

Conquering a burning 90-bbl. an hour oil well fire with water was the unusual feat accomplished by the Tidal Oil Co.'s men in the Cromwell Field of Seminole County, Oklahoma, recently, and by the use of this peculiar method the blaze was extinguished with the loss of only about 48 hours' production.

Every oil or gas well fire presents a unique problem which must be solved on the ground. The condition of the fittings and casing, the position and location of valves, the fact that they are open or closed at the time the fire occurs, and so many other factors enter into the consideration that practically every fire demands treatment different from others in the same locality and of about the same size, and upon the resourcefulness of the men who endeavor to fight it depends the amount of time and money necessary to bring the blaze under control. Methods employed successfully on one fire, however, can often be adapted or modified to meet the conditions on another with a consequent saving of time and expense, and the experiences of fire fighters on particularly difficult cases are invaluable for future emergencies.



After the battle. In the cellar is the master gate which the fighters tried to close and which is believed to be partially closed now. The well has scarcely been touched since the fire. The flow line leading to the right was what enabled them to use the unique method. It was bent but not severed by the falling debris.

A call had already been sent in to Tulsa for M. M. Kinley, of the Standard Torpedo Co., who had previously been successful in shooting out a gas fire in the same field for the H. F. Wilcox Oil & Gas Co., and two lines which were rigged up over the well to pull the shot in place had been burned in two when the water method occurred to Tidal officials who were on the ground and they decided to try that before resorting to the gelatin.

Oil Flowing Into Tanks

The control head and flow line had been damaged by the bolt of lightning which started the blaze and the resulting fall of debris, and were leaking in about a dozen places but remained intact. At the time the lightning struck the well, the tools were hanging in the hole and the oil was flowing into the tanks through the line shown in the accompanying picture. When the wire line dropped through the oil saver, a stream of flaming oil shot up about 30 or 40 feet in the air through the 1-inch hole, but the bulk of the oil continued to flow into the tanks.

Oil spraying into the cellar and all around the well from the leaks caught fire and made it extremely difficult to approach the control head to see what could be done. Several boilers were assembled in an effort to steam out the fire, but could do nothing with it. An attempt was then made to close the master gate, shown in the picture, by using a specially constructed tool, but it had become so hot that the wheel twisted off and that plan had to be abandoned.

M. M. Kinley, in his well known asbestos suit, however, rigged up the line for his shot, but the heat was so intense that the wire was promptly melted. Another line was likewise burned and a third was just about ready when the idea was conceived that the fire could be snuffed out by forcing water back through the flow line.

In order to accomplish this, and extinguish the scattered fire on the ground, the roller oil saver had to be removed and the versatile Kinley was assigned to this task. He made a noose out of a piece of wire line by running it through a piece of 2-inch pipe about 20 feet long and, with a stream of water playing on him, approached close enough to the fire to hook this over the top of the oil saver. A team on the other end of the line gave a jerk and the line parted. The second attempt was successful, however, and when the oil saver came loose, all of the oil shot straight up into the air, the entire output of 90 bbls. an hour burning before touching the ground.

Use Rotary Mud Hog

A rotary mud hog was then brought into play and mud was pumped from the slush pond around the well to extinguish all of the flames in the pit and to cool the various parts of the control head and pipe that were not kept cool by the flow of oil. Then a 10x4½x10 steam pump was hooked up to the flow line and combined with the mud hog put enough pressure behind the water to equal the pressure of the well. This acted as a snuffer, the pressure lessening the flow of oil while the water cut the remainder so that the flame sputtered for a moment or two and died. Water was pumped through the flow line at the rate of about 800 bbls. an hour.

The account sounds simple enough, but too much credit cannot be given the men who fought the fire at close range. The lightning struck about 8 o'clock Monday evening, June 9, and the oil saver was pulled off about 11 o'clock Tuesday night. The crew continued working all that night and all day Wednesday, and it was about 3 o'clock Thursday afternoon before the flame was finally snuffed out.

Compared with this fire, the Wilcox gas well in the same field, was like a bonfire, according to Mr. Kinley, who should know, as he became acquainted with both at the uncomfortable range of 15 feet. In both cases it was necessary to keep water playing on the men continually when they were near the blaze and even then the heat was scorching.

Cost of the Fire

The cost of this fire was estimated by the company at approximately $14,000, of which $7,830 represented the loss of 3,480 bbls. of oil and $3,500 was for the rig. A new rig has not yet been erected and, in fact, due to general conditions in the field, nothing has been done to the well since the fire. It is believed that probably the master gate in the cellar is partially closed, as a result of the unsuccessful efforts to close it during the fire, and is cutting down the well's output. In addition to the company's damage, the contractor suffered the loss of a string of tools valued at $10,000.

The Shaffer Oil & Refining Co. has prepared a detailed report covering the work of extinguishing its fire in Section 10-10-8, the first gas fire in the Cromwell Field, which occurred on the afternoon of April 23 and burned for 12 days.

This well, which was producing 62,000,000 feet of gas by actual gauge, sanded up and shut off entirely. When the master gate was opened to blow cavings from the hole, a rock struck one of the turnbuckle braces on the derrick and ignited the gas at the top of a joint of 8-inch casing that was standing above the upper gate. The heat prevented the master gate from being closed and caused the joints to swell, creating a leak that soon ignited under the tremendous pressure. When this caught fire, the gas in a 4-inch line leading from the well exploded and split the pipe for about 4 feet, creating further complications. The bursting of this pipe allowed more gas to escape under great pressure, part of which was directed down to the ground and part was deflected around the upper fittings, with an effect similar to an enormous blowtorch.

C. O. Rison, Bureau of Mines expert, was summoned, arriving on the scene the morning of the second day. Seven boilers were assembled from various places under great difficulties, due to the muddy condition of the roads and the swollen streams. The roads were so muddy that some of the firefighters had to arrive on horseback. A source of water supply was secured and water pipes laid and pumps installed and then the work of fighting the fire commenced.

So intense was the heat that three days were required to clear away the debris consisting of the steel parts of the turnbuckle rig, the steel calf and bull wheels, sand reels and rig irons. When this was finally accomplished, it was found necessary to pull of the joint of 8-inch and with it came the Christmas Tree and all fittings. That brought the fire all down to the ground in one place and a special fitting, made out of 8-inch pipe, to which was welded some 12½-inch pipe and a 15½-inch casing shoe as shown in the picture, was dropped over the end of the 8-inch casing and tied down. This carried off about 26,000,000 feet of gas by

(Continued on Page 117)

This picture of the Tidal Oil Co.'s No. 2 Harjo was taken before the oil saver was torn off. The column of flame was due to oil coming through the 1-inch hole, while the flames shooting out around the base were fed by a dozen leaks in flow line and control head.

This shows the manner in which the 8-inch casing with specially constructed joint was fitted over the hole after the Christmas tree had been pulled down. The second pipe with special fitting had not yet been placed from the other side. Note the hose chained to the pipe to keep the fitting cool. (Shaffer gas well.)

REED ROLLER BIT COMPANY — The Bit With the Bite

Leaves no junk in the hole

A Mechanical Masterpiece—

Reed Roller Bit and Reamer

[Combination]

Unmatchable Main Mechanical Points of Reed Roller Bits and Reamers

Bit and reamer body (in two separate units) designed for superior strength and each made in solid one-piece casting.

Parts properly arranged to prevent coming out. Under most adverse drilling conditions no junk ever left in hole.

Large area of cutting surface enables speedy progress.

Action of bithead cutters, traveling in different centers, attack the rock from many different angles.

Bearing shafts of cutters of select quality steel.

"Slush lubrication;" no pull-outs to refill lubricator—and no special connection.

Reamer connected to bithead is a complete rock-drilling unit that makes a FINISHED HOLE at one drilling.

Reamer, with four to six sets of cutters, round out a perfect full-gauged hole into which casing slips easily.

"Slush Lubrication"

puts Reed Bits and Reamers a long distance ahead of any rock drilling method known.

Two years ago drillers proved that a Reed Roller Bit could be run without a drop of oil, using slush pumped through the bearings instead. This eliminated continuous coming in and out of the hole to refill oil lubricators and make connections (involving considerable risk of losing the hole.) Heretofore, oil would hold sand in the bearings, grinding them out, while slush pumped full force keeps bearing surface free of grit and easy rolling.

If you are not getting results of this kind from other type rock bits, and you want some real facts—

Write For Special Booklet of Facts

Reed Roller Bit Co.

HOUSTON, TEXAS, U. S. A.

CALIFORNIA OFFICE: 1341 Santa Fe Avenue, Los Angeles. Phone Tucker 2785. Ask for Mr. E. B. Wiggins.

Oklahoma Field Operations

By C. D. Lockwood

Big wells mark week's operations in Oklahoma following inauguration of proration and curtailed buying. Semi-wildcat in Okfuskee County makes 100 bbls. Cromwell Pool extended by large producer. Well there flows at rate of 170 bbls. an hour. Output of State shows increase.

A 100-bbl. semi-wildcat northeast of Okemah in Okfuskee County, a 95-bbl.-an-hour gusher in the Papoose Pool in Hughes County, a 75-bbl.-an-hour addition to the Tonkawa deep sand producers, a 100-bbl.-an-hour northeast extension to the Cromwell Field in Seminole County, a northwest extension to the same area which made as high as 170 bbls. an hour, and a well in the Sholem Alechem district of Carter County that flowed more than 400 bbls. in 24 hours constituted the reply of producers in the Oklahoma fields to the proration policy during the past week. The newer districts such as these represented most of the activity, however, and proration was noticeably effective in many of the older areas where wells were being shut down in large numbers, and new tests were starting slowly. The tank manufacturers are also having their day as an extensive storage construction program is under way. Among the many companies that are safeguarding against the anticipated shortage of the coming months is the Roxana Petroleum Corp., which is erecting five 80's on its farm near Cushing. The Amerada Petroleum Corp. is building three 55's at Cromwell and one at Stroud and contemplates building at least six more at both of these fields together. Many other companies are planning construction on a similar scale.

The semi-wildcat referred to above belongs to the Amerada Petroleum Corp. It is located in the SE cor. SW SE, Section 17-12-10, and was shut down at 2,840 feet on top of what is believed to be the Dutcher sand. With the bit only scratching the top of the sand the well was spraying 100 bbls. and tankage was being erected.

In the Papoose Pool, the Berry Petroleum Co.'s No. 3 Meadows, NW cor. SE, Section 4-9-9, a location north of the same company's sensational 2,800-bbl. gusher of a few weeks ago, was making 95 bbls. an hour from sand at 3,326-27 feet. The 40 acres on which these wells are located seem to constitute the best lease in the field, by considerable odds. Another chapter on the freakishness of the pool was written at the same time the new Berry well came in when the Atlantic Oil Producing Co. picked up a hole full of water in sand at 3,346-51 feet in its No. 1 Simon, SE cor. NE SW, same section, an east offset to the big well of the pool.

In the southern part of the Papoose-Gilcrease area, the Margay Oil Co.'s No. 2 Cox, NW cor. SW, Section 17-9-9, topped a sand at 3,087-96 feet and at total depth of 3,105 feet had a show of gas and was underreaming the 6-inch. The H. F. Wilcox Oil & Gas Co. encountered water in small amounts in its No. 2 Cox, SW cor. NW, same section, in sand at 3,118-24 feet and was drilling ahead at 3,143 feet. The same companys No. 1 Cox, SE cor. NW, same section, was running the 5-inch to 3,037 feet.

In the Cromwell Pool

The biggest developments in the Cromwell Pool were those in the northeast and northwest directions. The Burke-Greis Oil Co.s No. 1 Brown, SW cor. SE SW, Section 10-10-8, after passing through dry gas, created a surprise by getting oil sand at 3,435-95 feet and was making 100 bbls. an hour. This opens up vast possibilities to the north and east, where the skeptics of the field have been making their last stand. A quarter of a mile northwest of production, the Superior Oil Corp.s No. 1, NE cor NW, Section 16-10-8, produced 2,585 bbls. during its first 24 hours, making as high as 170 bbls. an hour part of the time, and the second day's gauge was 2,410 bbls. On the fourth day it made 2,181 bbls. The gravity of the oil in this well tested 40.4 degrees (adjusted), which is said to be the highest in the field. Geologists differ on numerous points concerning the structure in the field, and differences in measurements make it difficult to determine whether or not the Superior well is higher or lower than the Gilliland producer, which is higher than the Hoffer well. According to the data used by one large company, however, the top of the sand in the Superior hole is one foot lower than the Gilliland, while the pay level is seven feet higher. Top of the sand was found at 3,420 feet, first oil at 3,433 feet and total depth at 3,445 feet. The Pure Oil Co.'s No. 1 Bruner, SE cor. Section 9-10-8, was fishing tools and making 11,000,000 feet of dry gas at 3,395-3,400 feet. The Roxana Petroleum Corp.'s No. 2 Brown, SW cor. Section 10-10-8, topped the sand at 3,407 feet and ran through a shale break at 3,422-25 feet with more sand at 3,425-37 feet and was making 25,000,000 feet of gas. The Tidal Oil Co.'s No. 5, NW cor. NE NE, Section 21-10-8, produced 2,389 bbls. in the first 24 hours from sand topped at 3,446 feet with oil at 3,456-79 feet. Its best production was 120 bbls. an hour. Sunday's gauge on the Tidal lease was 3,485 bbls. from three wells. The Gypsy Oil Co.'s No. 4 Hale Bruner, NW cor. SE SE, Section 16-10-8, topped a sand at 3,529 feet and was drilling at 3,544 feet with a showing of oil and gas.

Pipe line companies in the Cromwell Field continue to make new connections, the Magnolia having connected to the Pure Oil Co.'s well in Section 9. When the Ozark Pipe Line Co.'s (Roxana) new 4-inch and 6-inch line is completed, the field will have a pipe line capacity of 100,000 bbls. The Shaffer Oil & Refining Co.'s 4-inch line has been completed.

Tonkawa Deep Well

In the Tonkawa Field, the Comar Oil Co.'s No. 4-W Carmichael, NE cor. Section 3-24-1w, Noble County, a diagonal southwest offset to the Slick discovery, topped the sand at 4,149 feet, found first oil at 4,155 feet and at 4,161 feet was making 75 bbls. an hour. The first 24 hours' gauge while drilling in was 1,400 bbls. The same company's No. 4 Koffenbrink was drilling in lime at 4,337 feet.

The famous Pettit lease of the Marland Refining Co. in Section 20-23-8, Osage County, yielded one of the best wells of its career during the week when No. 9, a location west of the NE cor. SE, came in at the rate of 340 bbls. an hour from sand at 2,627-37 feet.

Burbank Production

Daily average production in the Burbank Field for the week ended July 2 was as follows by companies:

Company—	Wells	Bbls.
Carter Oil Co.	184	7,630
Comar Oil Co.	7	220
Cosden Oil & Gas Co.	98	5,974
Devonian Oil Co.	16	255
Gardner Pet. Co.	20	562
Gypsy Oil Co.	196	8,659
Kewanee Oil & Gas Co.	21	770
Laurel Oil & Gas Co.	16	263
Lorraine Pet. Co.	15	237
Midland Oil Co.	34	4,868
Mid-Kansas Oil & Gas Co.	36	1,761
Peters & Oliphant	1	125
Phillips Pet. Co.	62	10,862
Phillips Pet. Co. and Delmar Oil Co.	16	3,129
Phillips Pet. Co. and Skelly Oil Co.	168	6,805
Prairie Oil & Gas Co.	105	4,647
Producers & Refiners Corp.	29	553
Roxana Pet. Corp.	57	1,030
Simons, Moore et al	39	415
Sinclair Oil & Gas Co.	145	5,258
Skelly Oil Co.	15	1,038
Tidal Oil Co.	43	997
Twin State Oil Co.	24	2,315
Total Burbank proper	1,337	68,373
Total last week	1,328	70,741
Difference	9	2,368
Kay County Extension—		
George S Bole	3	399
Carter Oil Co.	11	2,174
Comar Oil Co.	19	1,300
Cosden Oil & Gas Co.	16	1,936
Gypsy Oil Co.	18	2,259
Laurel Oil & Gas Co.	2	449
Phillips Pet. Co.	30	5,245
Mid-Kansas Oil & Gas Co.	10	1,306
Prairie Oil & Gas Co.	4	864
Pure Oil Co.	5	151
Roxana Petroleum Corp.	8	649
Dye, Tomlinson et al	8	722
Skelly Oil Co. and Phillips Petroleum Co.	18	753
Sinclair Oil & Gas Co.	5	676
Texas Co.	16	1,051
Twin State Oil Co.	14	952
Total, extension	186	20,886
Total last week	186	22,132
Difference	none	1,246
Total Burbank	1,523	89,259
Total last week	1,514	92,873
Difference	9	3,614

Daily average pipe line runs from the Burbank Field during the week were as follows: Gulf Pipe Line Co., 11,679 bbls.; Cosden Pipe Line Co., 10,107 bbls.; Kay County Gas Co., 8,577 bbls.; Osage Pipe Line Co., 1,019 bbls.; Oklahoma Pipe Line Co., 18,960 bbls.; Prairie Pipe Line Co., 22,368 bbls.; Sinclair Pipe Line Co., 5,934 bbls.; Moore Refining Co., 3,023 bbls.; Standish Pipe Line Co., 1,516 bbls.; Empire Pipe Line Co., none; Mid-Kansas Oil & Gas Co., 3,067 bbls.; Magnolia Pipe Line Co., none; Twin State Oil Co., 952 bbls.; Ozark Pipe Line Co., 2,056 bbls. Total, 89,258 bbls. Storage in the field amounted to 11,930,000 bbls.

Tonkawa Production

The daily average production of the Tonkawa Field for the week ended July 2 was as follows by companies:

Company—	Wells	Bbls.
Amerada Petroleum Corp.	35	1,795
Blackwell Oil & Gas Co.	30	1,169
Carter Oil Co.	6	144
Champlin Refining Co.	2	15
Champlin Refining Co. and Twin State Oil Co.	1	24
Comar Oil Co.	312	13,270
Cosden Oil & Gas Co. and Marland Refining Co.	15	546
Gypsy Oil Co.	97	4,251
Healdton Oil & Gas Co.	28	1,600
McCaskey & Wentz	42	2,556
McMan Oil & Gas Co.	3	18
Pennok Oil Co.	27	4,102
Phillips Petroleum Co.	4	192
Prairie Oil & Gas Co.	12	589
Sinclair Oil & Gas Co.	1	19
Slick-Comar Oil Co.	31	4,251
Southwestern Petroleum Co.	15	678
The Texas Co.	5	64
White Eagle Oil & Ref. Co.	7	292
Total	672	35,574
Total last week	672	36,974
Difference	1	1,400

Daily average pipe line runs from the field were as follows: Kay County Gas Co., 12,181 bbls.; Ozark Pipe Line Co., 8,057 bbls.; Gulf Pipe Line Co., 3,433 bbls.; Champlin Refining Co., 5,817 bbls.; Bolene Refining Co., 1,483 bbls.; Globe Refining Co., 195 bbls.; Producers & Refiners Corp., 589 bbls.; Enid Oil & Pipe Line Co., 404 bbls.; Oklahoma Pipe Line Co., 144 bbls.; Empire Pipe Line Co., 818 bbls.; Golden Rule Refining Co., 185 bbls.; Prairie Pipe Line Co., 2,615 bbls. This included 1,000 bbls. which the Globe Refining Co. ran from the McCaskey & Wentz lease and 1,500 bbls. from the Moore Refining Co.'s tank farm.

Production by Fields

Cromwell, Wewoka and Papoose Pools were the areas showing increased production during the past week, while Tonkawa, Burbank and Stroud were down. In the Cromwell Pool, the daily average production for the week ended July 2 was 33,082 bbls. from 34 wells, a gain of 4,105 bbls. and 5 wells. New producers added at the close of the week raised the output to the estimated figure of 38,000 bbls. on July 7. The Papoose Pool's output averaged 7,405 bbls. from 22 wells, a jump of 1,735 bbls. and one producer. This field, also, was up considerably more due to excellent new wells. The Wewoka Field reported 9,138 bbls. from 64 producers, a gain of 1,041 bbls. and 1 well.

Among the losers, the Burbank Field suffered most heavily with a decline of 3,614 bbls., although 9 new wells were added to the list. The production average was 89,259 bbls. from 1,523 wells. Tonkawa followed closely with a decline of 1,400 bbls. and 1 new well, reporting 35,574 bbls. from 6773 wells. The Stroud Field appears to be definitely out of the dangerous list since it declined 709 bbls., while 2 new wells were added. Its figures were 22,236 bbls. from 23 producers. The failure of Stroud wells to hold up any better than they do has been one of the surprises of the season.

Oklahoma operations have fluctuated back and forth, gaining one week what they lost the week before so it is difficult to tell from the records how operators are responding to the proration and general shutdown movement. During the week ended June 28 an increase of 20 rigs and 47 drilling wells, combined with 36 more completions than the previous week, elevated the total number of operations to 1,618. This included 66 locations, 191 rigs, 946 drilling wells, 262 wells shut down and 153 completions.

In the Sholem Alechem Field of Carter County, the Humble Oil & Refining Co.'s No. 1 Dexter, C NE NW SE, Section 28-1s-3w, was flowing 425 bbls. through perforations in the casing from sand at 3,100-28 feet and 3,292-3,335 feet.

In the Graham Field, the Magnolia Petroleum Co.'s No. 4 Smith, C NE SW SW, Section 24-2s-3w, flowed 437 bbls. initially from sand at 1,934-90 feet.

Tulsa County Active

Tulsa County was the center of an unusual amount of activity, due to the large wells in the Vern-Bruner area west of the Oil Capital. The Superior Oil Corp. was spudding No. 3 Johnson, SW cor. NE SE, Section 26-19-11. The Sand Springs Home abandoned No. 2 Davis, NE cor. SE NW, Section 25-19-11, as a failure at 2,331 feet.

The Enfisco Oil Corp. was drilling at 1,000 feet in No. 1 Partridge, SE cor. NE NW, Section 4-19-12. Thompson & Black had a rig on the ground for No. 2 Partridge, CSL SW SW. Section 5-19-12.

A good well in the NW cor. of Section 8-19-12 started a regular stampede on town lots there with the result that 14 new tests were started on an area covering less than 40 acres. The cause of the riot was Morgan & Hancock's No. 1 Town Lot, NW cor. Section 8-19-12, which was good for 600 bbls. of 41 gravity oil natural from sand at 1,953-94 feet. They were also drilling No. 2, C NW NW NW, same section, a twin well, at 300 feet. Caldwell & Sons were spudding No. 2, CWL NW NW NW, same section, and were building a rig for No. 3, same location. Allison and others were spudding No. 1, CSL NE NW NW, same section, and Calvin & Belt were drilling at 600 feet in No. 1, CEL NW NW NW, same section. The Choctaw Oil & Gas Co. was spudding No. 1 SW cor. NW NW, same section. Crosby & Myers were also spudding No. 1 on the same location, and Hartman & Williams were drilling at 200 feet in No. 1, CWL NW NW NW, same section. Henry & Avery

were drilling No. 1, CSL NW NW NW, same section, at 500 feet, and Hughey & Worley were down 1,050 feet in No. 1, CEL SW NW NW, while Stein and others were rigging up tools for No. 1, CSL NW NW NW. G. M. Loonberger and others were drilling at 520 feet in No. 1, CSL SW NW NW, and Don C. Matthews was drilling at 970 feet in No. 1, CSL NW NW NW. Shreve and others were spudding No. 1 on the same location.

In Osage County

In Osage County, the Mutual Oil Co. had a 20 bbls. well in No. 6, CNL NE SE, Section 32-24-8. Pay was found at 1,943-78 feet.

The Mid-Kansas Oil & Gas Co.'s No. 5, C SW NE SW, Section 12-23-8, topped the Bartlesville at 2,066-2,100 feet and was swabbing 40 bbls. daily. In the Pettit Pool, the Red Bank Oil Co.'s No. 2, CEL SE SW, Section 20-23-8, found water at 2,830-37 feet and after plugging back to oil sand at 2,802-29 feet was swabbing 240 bbls.

A. E. Varlton's old well, No. 1 CWL NW NW NW, Section 28-23-8, was estimated good for 10 bbls. following a shot of 180 quarts in Bartlesville sand at 2,434-52 feet. It had been plugged back from 3,032 feet. The Marland Refining Co.'s No. 3, SW cor. NW NE, Section 29-23-8, was swabbing 25 bbls. of oil and 36 bbls. of water daily from total depth of 2,932 feet.

The Ozark Oil Co.'s No. 1, NW cor. SE, Section 19-22-8, was shut down at 400 feet; Thompson & Black plugged back from 2,860 feet to sand at 1,950-55 feet in No. 2, CNL NW NE, Section 29-22-8, and it made 27½ bbls. on the pump.

C. B. Peters was spudding No. 1, CWL SW SE, Section 4-23-9.

The Winona Oil Co.'s No. 17, NW cor. SW, Section 33-22-10, topped the Mississippi lime at 1,867 feet with a show of oil and gas at 2,230 feet but was abandoned with a hole full of water at 2,585 feet.

Hinnerman & Marshall passed through the Bartlesville sand at 1,800-64 feet, finding it dry and topped the Mississippi lime at 1,972 feet, in No. 8, CSL NW, Section 17-23-11. The well was plugged as a failure at 1,987 feet. The Winona Oil Co. shut in No. 2, SE cor. SW, Section 5-22-11, as a 5,000,000-foot gasser in the Tucker sand at 1,752-65 feet. Kilgore and others recorded a failure in No. 3, NE cor. Section 27-21-9, plugged at 2,820 feet.

Breene and others were swabbing 175 bbls. daily from No. 8, CNL NW NW, Section 23 21-10 producing from the Peru sand at 1,558-89 feet. The Barnsdall Oil Co.'s No. 23, CEL NE NE, Section 32-21-12, topped the big lime at 1,548 feet and found the pay at 1,926-28 feet good for 145 bbls. Gillespie & Grimes had an 80-bbl. well in No. 7, CNL NE, Section 6-20-12, in the pay at 2,081-84 feet. The Devonian Oil Co.'s No. 2, C NE SW SW, Section 17-20-12, picked up the second break at 2,197-2,203 feet, which yielded 8 bbls. of oil and 2 bbls. of water after a 70-quart shot.

The Sinclair Oil & Gas Co.'s No. 1, C SW NE SE, Section 3-25-8, topped the Mississippi Lime at 2,375 feet and picked up water at 2,915 feet. After plugging back to sand at 2,361-73 feet and shooting with 80 quarts it produced 100 bbls. The Mid-Kansas Oil & Gas Co.'s No. 1, SW cor. Section 21-25-8, increased to 65 bbls. an hour from sand at 2,684-85 feet. E. B. Lawson's No. 6, NE cor. SW NW, Section 28-25-8, was shot with 90 quarts in the Layton sand at 1,066-86 feet, making 50 bbls.

The Texas Co.'s No. 2, NE cor. NW SW, Section 22-24-9, was worth 100 bbls. following a 200-quart shot in the Bartlesville sand at 2,086-2,170 feet, with first oil at 2,125 feet. The Riverland Oil Co. plugged No. 2, CSL SW NE, Section 33-24-9, as a duster at 2,737 feet.

Kay County

In the northwestern corner of Kay County, Guyler & Daniels (T. B. Slick) abandoned No. 1, SE cor. NW, Section 23-29-2w, at 4,080 feet. In the middle western part of the county, near Blackwell, Polin & Denny had a rig in place for No. 1 Case, SE cor. SW, Section 4-27-1w.

In the Burkburnett extension, Kay County, the Roxana Petroleum Corp. made a 300-bbl. well out of No. 12 Pappan, C NW SE NE, Section 4-27-5, by shooting it with 30 quarts in sand at 2,868-2,920 feet, with first oil at 2,892 feet. The Comar Oil Co.'s No. 2 Mehojah, CEL NE SE SW, same section, was a 10-bbl. well after a shot of 60 quarts in sand at 2,913-29 feet.

Skelly Oil Co. and others brought in No. 8 Riggs, CWL SW NW SE, Section 16-27-5, good for 50 bbls. natural from sand at 2,941-2,950 feet.

On the Osage County side, the Phillips Petroleum Co. and Skelly Oil Co.'s No. 3, CSL SW SE NE, Section 26-27-5, made 75 bbls. following a shot of 120 quarts in sand at 2,932-84 feet, with first oil at 2,937 feet. The Peters Petroleum Co. was drilling at 425 feet in No. 2, CWL NW SW NW, Section 17-27-6.

On the Twin State Oil Co.'s new acreage, No. 8 in the CNL NE NW SW, Section 18-27-6, made 350 bbls. after a shot of 120 quarts in sand at 2,910-71 feet. The Kewanee Oil & Gas Co. was drilling No. 11, C SE NW SE, same section, at 685 feet and had a rig on the ground for No. 13, CEL SE NE SE, same section.

The Phillips Petroleum Co.'s No. 7, SE cor. NW, Section 20-27-6, found first oil and gas at 2,923 feet and at total depth of 2,956 feet was shot with 70 quarts, making 200 bbls. afterward. The same company's No. 3 and No. 4, in the SW of the SE, same section, were drilling at shallow levels. The Carter Oil Co.'s No. 13 in the SE SW, and Nos. 9 and 10 in the SW SE, Section 16-26-6, were likewise drilling at shallow depths. The Cosden Oil & Gas Co. swabbed 130 bbls. in the first 24 hours from No. 4, SE cor. Section 17-26-6, from sand topped at 2,894 feet, with oil at 2,906-60 feet.

The Phillips Petroleum Co. & Skelly Oil Co.'s No. 2, CNL NW NE SW, Section 25-27-5, was good for 200 bbls. after a shot of 120 quarts. Sand was topped at 2,926 feet, with oil at 2,935-77 feet.

Creek County

In Creek County, J. E. Crosbie was pumping 37 bbls. from No. 1 Richard, CEL SE NW SW, Section 25-15-7, after shutting off water with a lead plug. Sand was found at 3,290-98 feet. The Eastern Oil Co.'s No. 1 Roberts, NW cor. SE NE, Section 17-15-8, an old well, was good for 90 bbls. after a shot of 120 quarts in sand at 3,735-78 feet. The same company had a rig up for No. 5 Roberts, SE cor. NE, Section 17-15 8. The Pure Oil Co. was drilling No. 14 Yarhola, SW cor. SE NW, same section, at 862 feet and had a rig built for No. 15 Yarhola, NW cor. SE NW, same section. The Wolverine Oil Co. had a rig in place for No. 4 Wilson, SW cor. NW NW, same section, and the Skelly Oil Co. was drilling below 510 feet in No. 1 Peck, SE cor. SW NW, same section.

The Bu-Vi-Bar Oil Co. was underreaming the 6-inch casing at 2,840 feet in old well, No. 1, NW cor. SE, Section 26-15-8. C. G. Tibbens was spudding No. 2 Bruner, C SW SE SW, Section 12-14-8.

The Prairie Oil & Gas Co. shot No. 2 Bearhead, C NW NE NW, Section 13-14-8, with 80 quarts in sand at 2,361-2,405 feet with a resulting production of 15 bbls. The Phillips Petroleum Co.'s No. 1 Robison, NW cor. SW Section 29-14-8, was shot with 40 quarts and made 25 bbls. from sand at 3,404-14 feet, with bottom of hole 10 feet lower. It also was making from 5 to 10 bbls. of water. Mount & Clay were drilling No. 1 Davis, SW cor. NW SW, Section 2-15-9, at 350 feet.

The H. F. Wilcox Oil & Gas Co. abandoned No. 9 Short, NE cor. NW SW, Section 33-15-10, as a duster at 3,250 feet, and had a rig up for No. 7 Post, NE cor. SE NW, same section.

The Cosden Oil & Gas Co. had a rig on the ground for No. 1 Baker, SW cor. NW, Section 23-14-9. George W. Davis was drilling at 400 feet in No. 1 Wolfe, NE cor. SE SE, Section 23-14-9. Hall and others were drilling at 760 feet in No. 1 Johnson, NE cor. SE SW, Section 17-14-10.

The Burke-Greis Oil Co.'s No. 2 Barnett, SE cor. NE, Section 31-14-10, in the Tuskegee Pool, made 130 bbls. in the first 10 hours from sand at 3,413-20 feet. The Independent Oil & Gas Co.'s No. 3 Scott, NE cor. SE, Section 31-14-10, was good for 220 bbls. in the first 9 hours from sand at 3,419-28 feet. The Cosden Oil & Gas Co.'s No. 1 Flanagan, SW cor. NW, Section 34-14-10, was drilling at 350 feet.

Lassen Brothers shut down No. 1, SW cor. NW, Section 13-19-8, at 900 feet. G. W. Kinney abandoned No. 3 Morgan, SE cor. SW NE, Section 15-19-9, as dry at 2,760 feet. The Midwest Gulf Oil Corp. shut No. 1 Murrell, SE cor. NW, Section 17-19-9, for water at 1,007 feet. T. G. Johnson plugged No. 1 Cherry, NW cor. SW SE, Section 27-19-9, as a failure at 2,895 feet.

The Texas Co. was drilling at 360 feet in No. 2 Samuel, SE cor. SW SW, Section 8-18-9, and the Sapulpa Refining Co. had a rig in place for No. 2 Henry, SW cor. NW, Section 29-18-10. Bailey and others' No. 1 Wills, SE cor. NE, Section 30-18-10, originally good for 800 bbls. natural, from sand at 2,652-53 feet, was at latest report making 170 bbls. O. R. Howard's No. 4 McNac, NE cor. NW NE, Section 16-16-9, which came in at the rate of 600 bbls. natural from sand at 3,012-23 feet, increased to 43 bbls. an hour. W. E. Brown was spudding No. 2 Horner, C NE SE SE, Section 35-16-9, and the Devonian Oil Co. was drilling No. 3 Ralston, CNL NE SE SE, Section 9-16-10, at 300 feet.

Stroud Field

In the Stroud Field, Lincoln and Creek Counties, the Amerada Petroleum Corp. and Wrightsman's No. 1 Welsh, on the northern part of the Creek County strip, was drilling at 4,165 feet and flowing 110 bbls. hourly. It topped the light oil at 4,142 feet. The Amerada's No. 5 Lewis, on the southern strip, Section 12-14-6, made 1,320 bbls. on the fourth day from sand at 4 095-4,150 feet. Hoyt & Wicker were rigging up No. 1, Lot 24, Block 4, Key West Townsite, Section 12-14-6. J. A. Hull abandoned No. 4, CEL SE NW NW, same section, at 1,870 feet, and was building a rig for its twin. C. F Noble was drilling at 50 feet in No. 2, Lot 14, Block 4 and the Roxana Petroleum Corp. was below 780 feet in No. 3 Brace, CEL NW SE SW, same section. Willis and others were drilling No. 3, Block 3, Lot 6, same section, at 240 feet. The Roxana Petroleum Corp. was drilling at 130 feet in No. 2 Lewis, NE cor. SW SW, Section 7-14-7.

Cromwell Field

Activities in the Cromwell Field of northern Seminole County continue to spread out. The Pure Oil Co. was spudding No. 2 Bruner, C SE SW SE, Section 9-10-8, and was rigging up No. 3 Bruner, C SW SE SE, same section. The H. F. Wilcox Oil & Gas Co. had a rig up for No 8 Bruner, C SE SE SW, Section 15-10-8. The Roxana Petroleum Corp. was building a rig for No. 1, C NE NE SE, same section, and the Gilliland Oil Co. and Livingstone Oil Corp. were spudding No. 4 Proctor, C SE NW NE. Section 16-10-8, and No. 5, C NW NW NE, same section. The McMan Oil & Gas Co. was spudding No. 1 Baker, C NE NW NW, same section. The same company's No. 4 King, C NW SW NW, Section 22-10-8, topped the sand at 3,412 feet with first oil and gas at 3,419 feet in sand that was good for 1,300 bbls.

In Okfuskee County, about 3 miles east of the Cromwell Pool, the Independent Oil & Gas Co. abandoned No. 1 Carolina, C SW SE SE, Section 18-10-9, as a failure at 3,438 feet.

Wewoka Field

In the Wewoka Field, Seminole County, W. R. Ramsey's No. 1, NE cor. SE NE, Section 31-8-8, found the sand at 3,168 73 feet and was good for 750 bbls. the first 20 hours. The Independent Oil & Gas Co. and Sinclair Oil & Gas Co.'s No. 1 Grayson, C NE SE SE, Section 32-8-8, was drilled to 3,200 feet then plugged back 26 feet and shot with 140 and 305 quarts after which it made 40 bbls. on the pump from sand at 3,143-74 feet. The Prairie Oil & Gas Co.'s No. 2, C SE SW SW, Section 33-8-8, made 100 bbls. initially from sand at 3,085-3,205 feet.

Hughes County

Hughes County witnessed the abandonment of another test that was watched with great interest and that created considerable excitement at one time. It was the Paraffine Oil Co.'s No. 1 Love, NE cor. SE NE, Section 13-7-12, which was plugged as dry at 4,285 feet. In the northern part of the county, the Tidal-Osage Oil Co.'s No. 2 Baker, C NE SW SE, Section 4-9-11, picked up a sand at 2,885 feet, with oil at 2,932-49 feet, and was good for 70 bbls.

The Papoose Pool was receiving enough attention to indicate that producers consider there are many chances of extending or enlarging it. T. B. Slick had a rig on the ground for No. 1, C NW SW NE, Section 3-9-9, and abandoned the location for No. 1 Grayson, SW cor. NE, same section. His No. 1, C NW SE SW, same section, made 20 bbls. after a 60-quart shot in sand at 3,312-20 feet. The Berry Petroleum Co. was drilling at 350 feet in No. 4 Alexander, C NE NW SE, Section 4-9-9. The Foster Oil Co. was drilling at 200 feet in No. 1 Tiger, C SW SW NE, Section 4-9-9, and the Papoose Oil Co. was drilling No. 10 Alexander, C NW NE SE, same section, at 100 feet. The Skelly Oil Co. and others were spudding No. 1 Carter, C SW SW NW, same section, and the Sinclair Oil & Gas Co. was spudding No. 1 Willis, C NE NE SE, Section 5-9-9. The Margay Oil Co. was down below 550 feet in the second hole for No. 1 Brown, CSL SE SW SW, Section 17-9-9.

Southern Greer County

Another far western test was started up, this time in southern Greer County. Bozo and others were moving in timbers for No. 1 Harrington, C SW SW, Section 4-3n-22w.

In Beckham County, the Foster Investment Co. temporarily abandoned No. 2 Marshall, CNL NW SW NW, Section 32-9n-23w, at 2,979 feet.

In Roger Mills County, the Colorado Oil Co. was fishing casing at 2,360 feet in No. 1 Cantrell, C NW NW, Section 32-16-22w, and may skid the rig and start a new hole.

Okmulgee County

In Okmulgee County, Sam Bright plugged his old well, No. 2 Adams, CSL NE SE, Section 31-15-12, as dry at 2,242 feet.

The Pearson Oil & Gas Co. abandoned No. 1-A, NE cor. Section 3-16-12, as dry at 2,516 feet. The Riverland Oil Co. decided to shoot No. 4 Marshall, CNL SE SE, Section 8-16-12, which had been completed for 300 bbls. natural, and after a 20-quart treatment, it made 650 bbls. from sand at 2,354-61 feet. The same company had rigs up for Nos. 6 and 7 and was spudding No. 5 in the same quarter section. Suppies and others were rigging up tools for No. 1 Town Lot, CSL SE NW SE, Section 8-16-12. Pulaski Oil Co. abandoned No. 4 Wills, CWL SE SW, Section 22-16-12, as dry at 2,920 feet. The Oklahoma Natural Gas Co. had a rig up for No. 2, CNL NW, Section 25-16-12.

The Sheldon Oil Co. and Superior Oil Corp. encountered water in No. 1 Vore, NW cor. Section 34-16-12, in sand at 2,597-2,602 feet and were plugging it back to an upper gas sand. It was an old well.

Thompson & Black were drilling at 1,800 feet in No. 1 Harry, NW cor. SE, Section 5-16-13, and were drilling at 500 feet in No. 3, SW cor. NW SW, same section. Suppies and others abandoned No. 1-A, SW cor. Section 8-16-13, at 2,295 feet with a hole full of water. The Atlas Oil & Gas Co. abandoned the rig for No. 2 Rowe, C NE NW, Section 21-16-14.

Clover Brothers had a 5-bbl. producer after a 40-quart shot in No. 2 Grant, CEL SW NW, Section 3-15-11. Sand was found at 1,997-2,008 feet. D. D. Mickelson was drilling at 400 feet in No. 1 Lewis, SE cor. Section 4-15-11. The Waite Phillips Co. was drilling at 650 feet in No. 2 Richards, NE cor. NW SW, Section 14-15-11. The same company's No. 5 Richards, NE cor. SE SW.

(Continued on Page 103)

possibilities to the north and east, where Lorraine Pet. Co. ..... 15 237 Line Co., 404 bbls.; Oklahoma Pipe Line NW, same section. Henry & Ave

North-Central Texas Field

By Dan F. Dugan

Increase in wildcat production from Mitchell and Reagan counties. Wilcox Oil Co.'s No. 1 Worley, Gray County, first interesting oil producer in Panhandle outside Carson and Hutchinson counties. Critten & Lacey's No. 3 Cobb, Caddo Pool, Stephens County, 50 bbls. an hour.

FORT WORTH, Tex., July 7.—Production reports from the North Central Texas Field for the week ending July 3 credit the several producing districts with an increase over the previous week of 1,410 bbls. daily, with a total production reported at 127,975 bbls. Gains were reported from the Iowa Park Pool of 560 bbls., from the wildcat districts of 1,830 bbls. decreases were made in the Electra district of 265 bbls., Stephens County, 565 bbls., and Eastland County, 80 bbls.

The increase in the wildcat districts came from Mitchell and Reagan Counties. The No. 9 gusher of the Big Lake Oil Co. in Reagan County accounting for the greater per cent of the increase. Nearly all of the larger purchasing pipe line companies are limiting their purchases to 50 per cent of the crude runs and in most instances are refusing to connect with late completed producers. This condition should have a tendency to cause a letup in field development and a decrease in production runs.

Gray County Well

The week was a quiet one in all sections of the field. Some little interest was aroused with a week-end announcement that the Wilcox Oil Co., drilling No. 1 Worley in Gray County, near the town of Pampa, had picked up an oil bearing formation around 2,980 feet, had drilled it one foot in the pay and the test had made two head flows and then was shut down awaiting orders from the company's main office at Tulsa. The well was reported to have several hundred feet of oil in the hole when operations ceased. The test is on the Worley & Reynolds ranch with the operating company owning a 5,000-acre block of leases. It is 7 miles from the nearest gas production, and is the first oil production of interest in the Panhandle outside of Carson and Hutchinson Counties. Only a small amount of gas is being made—about 500,000 feet. The promise of such extension of Panhandle production is expected to further stimulate interest and operations in the territory following the well's initial showing. The oil from the well is reported to have tested around 40 degrees Baume and is very similar to that being produced in Carson County, in that it readily congeals and has a large content of wax. The producing formation is reported to be the same as that found in the Texas and Gulf Production Co.'s wells on the Burnett ranch in Carson County. The Wilcox well is approximately 25 miles southeast of the wells on the Burnett ranch.

Late field reports from Breckenridge credit Critten & Lacey's No. 3 Cobb in the Caddo Pool, Stephens County, with flowing better than 50 bbls. per hour from the gray lime topped at 3,223 feet and drilled to 3,295. The test is near the edge of the pool and does not extend the present producing territory any great extent.

In the south section of the field there was reported a total of 16 wells completed during the past week, six coming from the wildcat counties. Not a producer of importance appears in the list. Making up the sum total were 7 oil producers, 3 gassers and 6 dry holes.

In the semi-deep producing territory in the north section of the field, there was reported a total of 52 completions, 33 were oil producers, 18 disappointments and 1 gas well. The largest initial producer was the Electra Gulf Oil Co.'s No. 3 Mrs. Murray in the K. M. A. district, Wichita County, credited with pumping 250 bbls. daily at 1,765 feet. Several other wells in Archer and Wichita Counties are reported showing around 200 bbls. early daily. Completions for the entire field for the week totaled 68, 40 oil producers, 24 dry holes and 4 gas well.

Reported from Putnam, Callahan County, a rank wildcat that shot oil over the derrick was drilled into sand at around 1,900 feet by the Dudley Oil & Gas Co. in Section 9, Block 6, S. P. R. R. lands, Hugh Moore fee, about 25 miles southwest of Putnam. The well is shut down for storage and its capacity is not yet known. The new discovery follows the general production trend northeast to southwest.

Archer County Still Active

There was no decided decrease in drilling activities in Archer County during the past week; the completions report showed no loss in number compared with previous weeks. As a matter of fact development in this county goes merrily on in spite of decided attempts to curtail it.

Important wildcat developments have served to stimulate development work. The Knight-Hines discovery east of the Swastika district and the Superior Oil Corp.'s possible producer on the Kinder lease northeast of Archer City being the most interesting happenings of the week.

Knight & Hines' No. 2 Ragle, in Block 9, 4 miles northeast of Olney at 1,080 feet flowed at the rate of 3½ bbls. an hour when the sand was penetrated. The flow has gradually increased with deeper drilling and is now reported showing around 100 bbls. a day.

The Superior Oil Co.'s No. 1 Kinder, a rank wildcat, Block 58, about 4 miles northeast of Archer City, is reaming to set casing on top of a sand at 1,339 feet. This test, which earlier in the week encountered a good looking sand at 1,290 feet, was tested and showed a small trace of oil. It will probably be drilled deeper.

West of Holliday the Panhandle Oil & Refining Co. completed its No. 2 Orton in the sand at 1,579 feet and it is good for around 175 bbls. daily.

Wichita County Increase

With the usual number of completions for the wek and a slight increase in drilling, this section of the field produced no sensations. The most interesting semi-completion is the J. A. Gardner and others' No. 1 Peeler which appears good for from 75 to 350 bbls. at 1,650 feet. It is north of the Electra-Gulf Oil Co.'s producers on the Watkins land and gives the district a nominal extension.

R. L. Eckerty and others' No. 1 on their 18-acre lease on the Peeler land in the Watkins Pool, from sand at 1,650 feet is being placed on the pump and is showing for a 125-bbl. producer.

South of Fowlkes Station, Maer, Staniforth and others semicompleted No. 3 Burnett for 300 bbls. at 1,571 feet. The Humble Oil & Refining Co.'s test, No. 1-C John and Jeff Waggoner, Section 2, is drilling at 1,900 feet, after a showing of 1,736 feet considered encouraging. This is between the South Fowlkes and Beaver Creek Pools.

White, Fleming and others' No. 1 O'Donohoo, in the shallow field southeast of Burkburnett, encountered a sand showing considerable oil at 565 to 575 feet and is setting casing to test. The well is an offset to the east of the Couch well completed about 10 days ago with a daily output of 50 bbls. from the 1,200-foot sand.

Burkburnett-Hirschi

Completions: Clark and others' No. 7-A Ward & Todd, 35 bbls. at 1,790 feet; Langford and others' No. 10 Langford, 30 bbls. at 1,820 feet; Oil Investment Co.'s No. 1 Roller, dry at 1,755 feet.

Drilling: Ascott Co.'s No. 1 Roller, drilling in shale at 1,600 feet; Bailey and others' No. 1 Roller, drilling in rock at 1,550 feet; Burk Cameron Oil Co.'s No. 10 Foster, rigging to bail and test sand showing oil at 1,850 feet; Baldwin Brothers' No. 16-C Kennedy, drilling at 950 feet; Constantine Refining Co.'s No. 1 Roberts, drilling at 1,980 feet; Couch and others' No. 2 Donohoe, drilling in shale at 1,165 feet; Grace Oil Co.'s No. 3-B Daniels, rigging to pump sand showing oil at 1,300 feet; Hanks and others' No. 1 Roller, drilling in hard rock at 1,500 feet; Hunter and others' No. 1 Musgrave, drilling in hard lime at 1,605 feet; Magnolia Petroleum Co.'s No. 6 Treece, swabbed 16 bbls. in 14 hours from sand at 1,700 feet and not yet completed; No. 6 Beach, drilling in soft rock at 945 feet; McDabb Oil Co.'s No. 3 Potter, drilling in lime at 1,685 feet; Texhoma Oil & Refining Co.'s No. 1 Rexford, drilling with machine at 220 feet; Tidwell and others' No. 1 Dale, drilling in shale at 1,865 feet; White and others' No. 1 Donohoe, drilling at 410 feet.

Wichita County

Completions: The Texas Co.'s No. 43 Skinner, 10 bbls. at 1,800 feet; Apple and others' No. 4 Jennings, 45 bbls. at 1,585 feet; Burnett Ranch Oil Co.'s No. 2 Burnett, 220 bbls. at 1,565 feet; Carter and others' No. 4 Fisher, 35 bbls. at 1,570 feet; Humble Oil & Refining Co.'s No. 16-A Douglas, 150 bbls. at 1,950 feet; Panhandle Oil & Refining Co.'s No. 4 McCarty, 5 bbls. at 1,790 feet; Rio Bravo Oil Co.'s No. 7-E Waggoner, 120 bbls. at 1,945 feet; Section Two Oil Co.'s No. 1 Burnett, 245 bbls. at 1,575 feet; United Production Co.'s No. 3 Fouch, 60 bbls. at 1,465 feet; Dr. Wallace's No. 2 Fassett, dry at 1,950 feet; Electra Gulf Oil Co.'s No. 3 Mrs. Murray, 250 bbls. at 1,765 feet; same company's No. 5 Mrs. Murray, 150 bbls. at 1,765 feet; Petroleum Production Co.'s No. 3-A Allen, 40 bbls. at 1,635 feet.

Wilbarger County

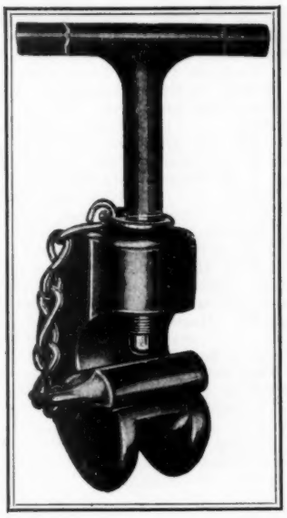
Completions: Cooke and others' No. 5 Waggoner, 25 bbls. at 1,530 feet.

Drilling: Adams and others' No. 1 Wigley, drilling at 1,465 feet; Apple and others' No. 5 Jennings, drilling in shale at 1,000 feet; Baldwin and others' No. 1 Fisher, drilling at 300 feet; Burkland and others' No. 1 Burnett, ratholing with small show of oil at 1,590 feet; Carter and others' No. 1 Burnett, drilling dry sand at 1,630 feet.

Cooke and others' No. 1 Throckmorton, drilling in brown shale at 630 feet; Culberson and others' No. 26 Jeff Waggoner, drilling at 155 feet; Douglas and others' No. 3-A Jennings, fishing for tools at 515 feet; Evans and others' No. 1 Fisher, testing sand showing 15 bbls. at 697 feet; No. 2 Fisher, drilling at 310 feet; Gulf Production Co.'s No. 61 Miller, drilling in brown shale at 1,235 feet; No. 2-J Waggoner, drilling at 1,000 feet; No. 22-A Burnett, drilling in brown shale at 1,470 feet; Howell and others' No. 1 Burnett, drilling at 550 feet; Humble Oil & Refining Co.'s No. 1-C Waggoner, drilling in hard shale at 1,815 feet; No. 3-B Burnett, drilling water sand at 1,000 feet; Jackson and others' No. 1 Gladd, drilling at 540 feet; Kentucky Oil Corp.'s No. 1 Burnett, drilling in soft rock at 1,085 feet; Magnolia Petroleum Co.'s No. 36-A Waggoner, drilling in shale at 1,745 feet; No. 37-A Waggoner, drilling at 720 feet; No. 3-C Waggoner, drilling in rock at 1,350 feet; Panhandle Oil & Refining Co.'s No. 5 McCarty, drilling at 1,100 feet; Ryan Petroleum Co.'s No. 21 Nance, swabbed 300 bbls. in 24 hours from a sand at 1,690 feet; No. 22 Nance, drilling at 730 feet; Stacy and others' No. 1-B Burnett, drilling in shale at 1,860 feet; Section Two Oil Co.'s No. 2 Burnett, drilling at 50 feet; Texhoma Oil & Refining Co.'s No. 4-C Burnett, drilling in mud at 1,420 feet; No. 2-D Burnett, drilling in lime and sand and swabbing to clean out at 1,818 feet; No. 1 Burnett, drilling in shale at 1,210 feet; United Central Oil Corp.'s No. 1 Nance, swabbed 162 bbls. in 24 hours at 1,675 feet; No. 6 Nance, fishing for bit at 1,630 feet; No. 7 Nance, drilling at 200 feet; Campbell and others' No. 1 Chilson, will test oil sand at 1,830 feet; Church and others' No. 2 Newton, drilling at 400 feet; Dee and others, No. 1 Mangold, drilling shale formation at 1,050 feet; Electra Gulf Oil Co.'s No. 4 Mrs. Murray, drilling in rock at 800 feet; No. 6 Mrs. Murray, drilling at 205 feet; Harvey and others' No. 1 Peeler, flowed 70 bbls. in 24 hours from sand at 1,660 feet; Hill and others' No. 7 Overby, testing sand showing oil at 1,483 feet; Humble Oil & Refining Co.'s No. 2 Allen, drilling at 1,085 feet; K. M. A. Oil Co.'s No. 1 Allen, will test sand showing oil at 1,720 feet; Kruger and others' No. 5 Allen set 6⅝-inch casing and shut down at 1,601 feet; Parker Brothers' No. 1 Love, drilling at 1,350 feet; Petroleum Production Co.'s No. 2 Newton, coring at 1,820 feet; Underwood Drilling Co.'s No. 3 Maer, setting 6⅝-inch casing on top of sand showing oil at 1,758 feet; No. 4 Maer, drilling at 440 feet; United Central Oil Corp.'s No. 1 Mrs. Murray, drilling in rock at 1,205 feet; Dumas and others' No. 1 Stephens, drilling at 100 feet; Herring and others' No. 1 Castlebury, drilling with rotary at 330 feet; Magnolia Petroleum Co.'s No. 45 Sumner, drilling in shale at 845 feet; Noble Oil Co.'s No. 1 Waggoner, drilling in rock at 1,625 feet; Pigg and others' No. 1 Davis, drilling at 650 feet; South Vernon Oil Co.'s No. 1 Richardson, fishing job at 1,255 feet; Thelma Wells' No. 1 Wharton, showing 1,500,000 feet of gas and a little oil and drilling sand at 1,315 feet.

Archer County

Completions: The Texas Co.'s No. 1 Key, dry at 1,795 feet; Archer Oil Corp.'s No. 2 Robertson, 60 bbls. at 1,415 feet; Baldwin and others' No. 1 White, dry at 1,648 feet; Bridwell & Heldrick's No. 5-F Wilson, 75 bbls. at 1,589 feet; Carter and others' No. 1 White, 95 bbls. at 1,402 feet; Day and others' No. 3 White, 45 bbls. at 1,448 feet; Empire Gas & Fuel Co.'s No. 16-C Wilson, 125 bbls. at 1,624 feet; same company's No. 18-C Wilson, 100 bbls. at 1,622 feet; Franklin and others' No. 8 Parrish, 150 bbls. at 1,600 feet; same company's No. 10 Parrish, dry at 1,612 feet; Humble Oil & Refining Co.'s No. 1 Jones, dry at 1,650 feet; same company's No. 2 Wilson, 20 bbls. at 1,590 feet; Humphrey and others' No. 2 White, 180 bbls. at 1,618 feet; Johnson and others' No. 1 Miller, dry at 1,733 feet; Jones Oil Co.'s No. 10 Wilson, 50 bbls. at 1,629 feet; Jones, Mitchell and others' No. 1 Wilson, dry at 1,612 feet; Kentucky Oil Corp.'s No. 1 Mrs. Waggoner, dry at 1,802 feet; Major Oil Co.'s No. 3 Mrs. Turbeville,



Ratigan's Polish Rod Clamps and Grips—at any F-R Store

THE ILLUSTRATION shows the Ratigan Polish Rod Clamp No. 2. It is quickly and SAFELY applied. The polish rod cannot be injured.

There are also Ratigan Polish Rod Grips, for light and heavy duty. They are designed to keep the Polish Rod straight and free from damage.

These, and all other Ratigan "Sure-Grip" Products are for men who want the best that money can buy. Substitutes can be had, which serve the purpose after a fashion, and for less initial cost, but nothing better can be had at any price.

Send for illustrated booklet showing the complete Ratigan "Sure-Grip" Line.

Dreadnaught Rotary Equipment—Complete Cable Tool Equipment—Reid Gas Engines and Powers—Donovan Boilers—Roebling Wire Lines—Whitlock Cordage—F-R Electric Light Plants—Axelson Working Barrels and Sucker Rods—National Transit Steam and Power Pumps—Jones and Laughlin Tubular Goods —Ratigan Beam Hangers, Sure Grips, etc.—Camel Hair Belting—F-R Drilling and Pumping SERVICE Belting—Warren Steam Engines—Johns-Manville Packings—Etc.

The Frick-Reid Supply Co.

Tulsa, Okla. Pittsburgh, Pa.

West of the Mississippi—Stores Everywhere

In Oil Country Equipment—the most HUMAN organization in America

5 bbls. at 1,038 feet; McCarty Oil Co.'s No. 2-B Wilson, 75 bbls. at 1,586 feet; Moore and others No. 2 Wilson, dry at 1,804 feet; Murchison and others' No. 1 Parrish, dry at 1,618 feet; same company's No. 2 Richardson, 50 bbls. at 1,350 feet; Murchison and others' No. 2 White, 90 bbls. at 1,590 feet; Oil Investment Co.'s No. 1 Wilson, dry at 1,655 feet; Panhandle Oil & Refining Co.'s No. 1 Perkins, dry at 1,997 feet; Sheldon and others' No. 1 Ward, dry at 1,001 feet; Staley and others' No. 6-C Wilson, 150 bbls. at 1,607 feet; Sun Oil Co.'s No. 5 Farmer, 40 bbls. at 1,479 feet; White Oil Corp.'s No. 2 Wilson, dry at 1,638 feet; Woodburn Oil Corp.'s No. 7-B Wilson, 15 bbls. at 1,390 feet.

Drilling: Andrade and others' No. 1 Graham, spudding No. 1 Coffield, drilling in mud at 1,300 feet; Atlantic Oil Co.'s No. 3 Parrish, preparing to pump and test oil sand at 1,575 feet; No. 4 Parrish, will pump sand showing oil at 1,570 feet; Brader and others' No. 1 Farmer, showing estimated 100 bbls. a day and standardizing at 1,260 feet; Buie Production Co.'s No. 1 Kelly, drilling in shale at 1,335 feet; Burns and others' No. 1 Coffield, drilling in rock at 1,620 feet; Camp Oil & Gas Co.'s No. 11 Wilson, preparing to pump and test sand showing oil at 1,600 feet; Cato and others' No. 1 Mask, drilling in shale at 1,225 feet; Chambers and others' No. 1-B Andrews, drilling at 950 feet; Clark and others' No. 2 Turbeville, spudding; Comet Petroleum Co.'s No. 2 White, preparing to pump and test oil sand at 1,585 feet; Creath and others' No. 1 Hawkins, drilling at 1,480 feet; Dee Brothers' No. 1 Andrews, drilling in shale at 200 feet; Duke and others' No. 1 Herron, drilling at 790 feet; Franklin and others' No. 9 Parrish, preparing to pump and test oil sand at 1,602 feet; Gherke and others' No. 1 Logan, drilling at 955 feet; Graham and others' No. 5-E Wilson, shut down on top of sand showing oil at 1,578 feet: Griswold Oil Co.'s No. 2-B Wilson, drilling in rock at 1,610 feet; No. 6-F Wilson, drilling in shale at 1,305 feet; Gulf Production Co.'s No. 3 Siegle, drilling in blue shale at 1,050 feet; Art and others' No. 1 Turbeville, drilling in rock at 995 feet; Hill and others' No. 1 Wilson, tested sand showing salt water and drilling deeper at 1,556 feet; Hobbs and others' No. 1 Wright, bailed salt water and a little oil from sand at 411 feet; Holmes and others' No. 1 Wilson, drilling at 1,000 feet; Humble Oil & Refining Co.'s No. 3 Wilson, swabbed 100 bbls. from sand at 1,585 feet; Jeffries and others' No. 1 Parrish, resetting 6⅝-inch casing at 1,670 feet; Jones and others' No. 1 Rutty, drilling at 1,000 feet; Kimbrew and others' No. 3 Perkins, fishing job at 1,482 feet; No. 4 Perkins, drilling at 485 feet.

Drilling in Rock

Kinney and others' No. 1 Porter, drilling in rock at 1,700 feet; Knight and others' No. 2 Ragle, 400 feet of oil in hole from sand at 1,080 feet; Lowry and others' No. 1 Harbison, set 6⅝-inch casing on top of sand at 1,345 feet; Magnolia Petroleum Co.'s No. 2 Robinson, cemented 6⅝-inch casing at 1,387 feet; Major Oil Co.'s No. 4 Turbeville, spudding; McCarty Oil Co.'s No. 3-B Wilson, 500 feet of oil in hole and drilling sand at 1,590 feet; No. 4-B Wilson, drilling at 300 feet; Miller Brothers' No. 1 Wilson, rigging to swab and test sand at 1,625 feet; Murchison and others' No. 1 White, bailing oil sand at 1,590 feet; No. 2 Rutty, ratholing at 1,540 feet; No. 3 Rutty, rigging to pump and test oil sand at 1,585 feet; Norton and others' No. 1 Graham, drilling in sand at 1,00 feet; Panhandle Refining Co.'s No. 2 Orton swabbed 250 bbls. from sand at 1,790 feet; Waite Phillips' No. 1 Chancellor, drilling in shale at 1,510 feet; No. 1 Ford, spudding; No. 1 Wilson, drilling in rock at 1,265 feet; Prairie Oil & Gas Co.'s No. 8-E Wilson, swabbed 150 bbls. from sand at 1,575 feet; Riner and others' No. 9 Wilson, drilled dry sand at 1,620 feet; Scott and others' No. 1 Farmer, will test sand showing oil at 1,515 feet; Simms Oil Corp.'s No. 1 Nichols, set and cemented 6⅝-inch casing at 1,605 feet; Sunshine State Oil & Refining Co.'s No. 1 Key, drilling in blue shale at 1,365 feet; No. 1 Riley, drilling in rock at 1,135 feet; Superior Oil Co.'s No. 1 Kinder, drilling in soft rock at 1,330 feet; Tex-O-Kan Oil Co.'s No. 1 White, drilling at 1,000 feet; United Drilling & Development Co.'s No. 1 Wilson, drilling at 1,525 feet; Winan and others' No. 1 Anderson, drilling in soft rock at 1,185 feet; Woodburn Oil Corp.'s No. 8-B Wilson, drilling at 940 feet; No. 9-B Wilson, drilling at 540 feet.

Young County

Drilling: Bashara and others' No. 1-A Graham, drilling in rock at 475 feet; Brock and others' No. 1 McBrayer, spudding; Carter and others' No. 1 Rubenkoenig, fishing job at 4,175 feet; Dunn and others' No. 1 Johnson, spudding; Eagle Creek Oil Co.'s No. 1 Eagan, drilling in shale at 1,425 feet; Henson and others' No. 1 McMillan, drilling in lime at 3,510 feet; Hubbard Drilling Co.'s No. 1 Price, drilling at 250 feet; Humble Oil & Refining Co.'s No. 1 Graham, spurring; Keener Oil Co.'s No. 1 Bashara, drilling in soft rock at 1,860 feet; McGuire and others' No. 1 Carter, drilling in hard shale at 2,730 feet; McGarr and others' No. 1 Johnson, drilling at 1,050 feet; No. 1 Scarborough, drilling at 260 feet; Mille and others' No. 1 Hume, drilling in hard rock at 1,650 feet; Monroe Production Co.'s No. 1 Vaughan, drilling in shale at 2,115 feet; Mutual Oil Co.'s No. 12 Driver, drilling in brown shale at 1,430 feet; Nine Hundred Oil Co.'s No. 2 Benson, drilling at 795 feet; O'Neal and others' No. 1 Robinson, spudding; Peter Oil Co.'s No. 1 Simms, running 8¼-inch casing at 460 feet; Reed and others' No. 1 Graham, drilling at 470 feet; States Oil Corp.'s No. 1 fee, drilling at 2,935 feet; Union Oil Co.'s No. 1-A Keithley, drilling in shale at 1,940 feet.

Stephens County

Completions: Curry Pool Oil Co.'s No. 1 Williams, 25 bbls. at 3,315 feet; Sun Oil Co.'s No. 9-A Carey, 15 bbls. at 1,820 feet; The Texas Co.'s No. 9 Keithley, 35 bbls. at 3,150 feet.

Drilling: Brown and Co.'s No. 1 Hudspeth, drilling in hard rock at 2,305 feet; Critten and others' No. 3 Cobb, flowing around 50 bbls. an hour and not yet completed below 3,000 feet; No. 5 Cobb, underreaming casing at 1,730 feet; No. 2 Cunningham, drilling at 2,240 feet; No. 3 Cunningham, drilling in shale at 1,600 feet; Ivan Petroleum Co.'s No. 2 Martin, drilling in black lime at 3,500 feet; Liner and others' No. 2 Brown, fishing for 10-inch casing at 1,065 feet; No. 1 Richardson, spudding: Marchbanks and others' No. 1 Hudspeth, running 6-inch casing at 2,725 feet; Mid-Kansas Oil & Gas Co.'s No. 12 Hill, showing 10 bbls. of water and drilling in gray lime at 3,310 feet; No. 13 Hill, drilling at 2,615 feet; No. 14 Hill, drilling shale at 2,335 feet; No. 5 Hill, drilling in blue shale at 2,435 feet; No. 3 Lowe, fishing job at 950 feet; No. 2 Lowe, sidereaming at 2,445 feet; No. 3 Richardson, drilling by casing at 3,185 feet; Prairie Oil & Gas Co.'s No. 15 Atkins, drilling by tools at 3,260 feet; No. 1 Caldwell, drilling in rock at 1,200 feet; Raney Buckeye Oil Co.'s No. 2 Walker & Caldwell, drilling in lime at 3,340 feet; Rochelle and others' No. 2-A Sweeney, fishing for casing at 1,400 feet; No. 3-A Sweeney, drilling at 900 feet; The Texas Co.'s No. 20 Black, drilling in soft rock at 2,930 feet; Texas Pacific Coal & Oil Co.'s No. 5 Rogers, showing a little oil and drilling in black lime at 3,290 feet; No. 6 Rogers, drilling at 3,200 feet; Walker & Caldwell's No. 10 Walker & Caldwell, drilling in shale at 3,200 feet; Walker and others' No. 1 Walker, sidereaming 8-inch casing at 2,380 feet; No. 2 Walker, drilling at 2,740 feet; Weekly and others' No. 1 Todd, drilling at 375 feet; Brown and others' No. 4 Brown, trying to shut off water at 3,270 feet; No. 1 McClenney, 300 feet of oil in hole and shut down in gray lime at 4,160 feet; Foster and others' No. 2 Gardner, in lime and shale at 3,225 feet; Fouts and others' No. 1 McClesskey, drilling at 450 feet; Humble Oil & Refining Co.'s No. 2 Jones, pulling 4½-inch casing to sideream at 3,862 feet; Little and others' No. 2 Drake, drilling by casing at 3,650 feet; Magnolia Petroleum Co.'s No. 9 Brown, fishing for tools at 3,125 feet; No. 2 Brown, drilling at 3,610 feet; No. 5 Brown, running 5-inch casing at 3,810 feet. No. 6 Brown, shut down for wire line at 3,215 feet; No. 1 Gardner, drilling in lime at 4,030 feet; No. 2 Gardner, drilling at 3,680 feet; No. 7 Stoker, drilling in lime at 3,540 feet; Pitzer and others' No. 1 Stoker, drilling in black lime at 3,125 feet; Prairie Oil & Gas Co.'s No. 1 Stoker, drilling in black lime at 3,740 feet; No. 8-C Veale, showing some gas and running 5-inch casing at 3,935 feet; Republic Production Co.'s No. 4 Jones, spudding; Root and others' No. 1 Yoes, drilling at 700 feet; Scott and others' No. 1 Davis, running 5-inch casing at 3,160 feet; Seaboard Oil & Gas Co.'s No. 1 McClesskey, drilling in mud at 600 feet. Sinclair Oil & Gas Co.'s No. 9 Henderson, drilling in shale at 2,275 feet; Snowden & McSweeney's No. 1 Jones, cleaning out and swedging 6-inch casing at 3,275 feet; No. 11 Jones, drilling at 1,800 feet; States Oil Corp.'s No. 1 Sikes, drilling in soft rock at 2,000 feet; No. 1 Williams, hole full of water and showing 5,000,000 feet of gas at 3,485 feet; Sun Oil Co.'s No. 2 Boone, drilling by tools at 3,277 feet; Swensondale Oil Co.'s No. 1 Houston, showing oil and gas and drilling at 2,230 feet; The Texas Co.'s No. 8 Heathley, drilling at 1,525 feet; No. 10 Keithley, drilling at 1,530 feet; No. 40-A Parks, drilling in shale at 2,910 feet; Walker and others' No. 1 Newman, drilling at 1,100 feet.

Eastland County

Completions: Donnelly Brothers' No. 1 Wheeler, 15 bbls. at 1,175 feet; Flaherty and others' No. 1 Ross, 500,000 feet of gas at 2,850 feet; McLester and others' No. 2 Hunt, dry at 1,245 feet; Mook Oil Co.'s No. 1 Casey, 9,000 000 feet of gas at 3,125 feet; Turner and others' No. 1 Steel, dry at 3,595 feet; Williams and others' No. 2 Fox, dry at 1,200 feet.

Drilling: Adams and others' No. 1 Dawson, drilling at 1,020 feet; Barkley and others' No. 5 Wright, showing oil in a sand and lime formation at 3,380 feet; Buffington and others' No. 1 Foster, drilling at 850 feet; Dixie Co.'s No. 1 Waggoner, 1,000 feet of oil in hole and drilling at 3,450 feet; El Dorado Oil Co.'s No. 1 Hague, showing water and drilling at 1,630 feet; Kirk & Brewer's No. 1 Young, drilling in hard rock at 2,660 feet; Magnolia Petroleum Co.'s No. 16 Westmoreland, fishing for bit at 2,831 feet; Mid-Kansas Oil & Gas Co.'s No. 6 Harrell, drilling in shale at 2,610 feet; Panhandle Oil & Refining Co.'s No. 20 Hightower, drilling at 700 feet; No. 7 Webb, drilling at 850 feet; Parsons and others' No. 1 Moles, drilling at 400 feet; Pardee and others' No. 1 Hague, drilling in shale at 1,460 feet; Root and others' No. 1 Lylera, drilling at 960 feet; Republic Production Co.'s No. 2 Sweeney, drilling in rock at 500 feet; Shannon and others' No. 4 Neal, drilling at 490 feet; Bobo and others' No. 1 Amis, drilling at 2,800 feet; Colquitt and others' No. 1 Downtain, cleaning out at 3,705 feet; Dougherty and others' No. 1 Johnson, drilling in black lime at 3,780 feet; Donnelly Drilling Co.'s No. 1 Stubblefield, drilling at 3,070 feet; Lowe and others' No. 4 Harris, drilling in soft rock at 2,250 feet; McBride and others' No. 1 White, showing oil and gas and drilling in lime at 2,735 feet; Rosenfield and others' No. 1 Brunett, fishing job at 2,725 feet; States Oil Corp.'s No. 4 Hise, drilling in gray lime at 3,450 feet; The Texas Co.'s No. 1 Ramsey, drilling at 900 feet; Thornell and others' No. 1 Stubblefield, drilling at 1,910 feet; Turner and others' No. 3 Jones, setting 8¼-inch casing at 2,215 feet.

Wildcats

Baylor County—Drilling: Batchelder and others' No. 1 Wallace, rigging up rotary; Cranfill and others' No. 2 Mills, spudding; Critten and others' No. 1 Coffee, drilling in shale at 1,425 feet; Independent Oil Co.'s No. 1 Robertson, cleaning out at 1,010 feet; Magnolia Petroleum Co.'s No. 1 Mills, 450 feet of oil in hole and are rigging to test sand at 1,430 feet.

Clay County—Completions: Gulf Production Co.'s No. 1-A Boddy, dry at 3,860 feet.

Drilling: Cumley and others' No. 1 Stine, rigging to pump oil sand at 1,780 feet; D'Yarmett and others' No. 1 Bullington, have pumped a little oil from sand at 1,195 feet; Dixon and others' No. 1 Godfrey, drilling in shale at 1,305 feet; Knox Finley Development Co.'s No. 3 Saner, looks like a small oil producer from sand at 1,140 feet; Nebraska Oil Co.'s No. 1 Myers, shut down for orders on top of sandy lime at 3,400 feet; Sealing Oil Corp.'s No. 1 Scaling, underreaming 6⅝-inch casing at 2,040 feet.

Foard County—Drilling: Landreth Production Co.'s No. 1 Halcell, drilling at 2,290 feet.

Knox County—Completion: Roehl and others' No. 1 Ward, dry at 2,814 feet.

Drilling: Williams and others' No. 1 Lawson, drilling at 420 feet.

(Continued on Page 104)

Kansas Oil Field News

By C. D. Lockwood

The most sensational discovery in southern Kansas that has occurred in years was the finding of a 4,000-bbl. gusher in the Wilcox sand about 10 miles west of Independence by the Red Bank Oil Co. It is located in the SW cor. SE. Section 28-32-14, about 4 miles southeast of Elk City, in Montgomery County, and about 6 miles southeast of the old Elk City gas field. The second break was topped at 1,682 feet and with the bit just four feet in, the well started flowing. It was partially shut in due to the lack of tankage but was flowing 40 bbls. hourly through a 2-inch valve which was partially closed. The gravity of the oil, unlike the so-called Wilcox production in the original Red Bank Pool south of Coffeyville, tested 33.5 degrees normal gravity, with a gasoline content of 18 to 25 per cent. The Prairie Pipe Line Co. is running the oil. This marks the first successful effort to find the Wilcox pay in the southeastern part of Kansas since the same company's discovery near the Oklahoma line.

Operations in the Kansas fields declined to some extent, the total of 394 for the week ended June 28 having been 27 less than that reported the previous week. There were 38 locations, 69 rigs up, 180 wells drilling, 82 wells shut down and 25 completions during the latter week, an increase of 9 drilling wells and a decrease of 2 rigs and 1 location. The decrease in the total was due to a loss of 25 completions.

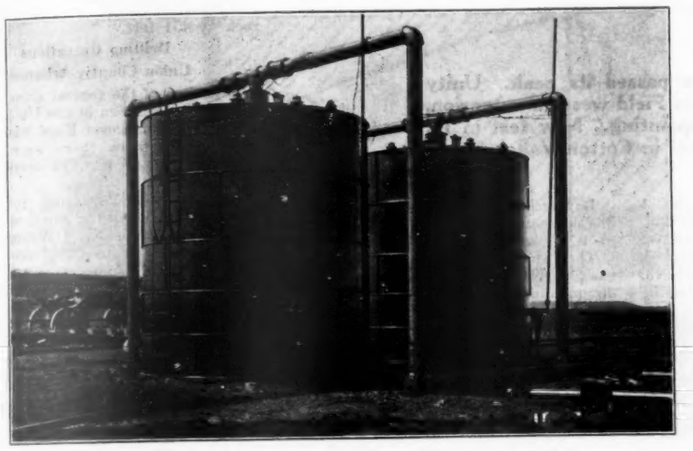
Greenwood County

The Agard and Browning Pools of Greenwood County continued to furnish medium-sized producers and considerable new work was being started in spite of the general situation. In the former district, the Lewis Oil Co. and Natoinal Refining Co. shot their No. 1 Headleson, CWL NW SE, Section 1-24-9, with 20 quarts in sand at 2,310-37 feet and it responded with 100 bbls. of oil. There was a little water in the bottom of the sand. Polhamus and others made a 150-bbl. well out of No. 6 Lewis, CNL SE NE, Section 11-24-9, with a shot of 100 quarts in sand at 2,262-2,309 feet. The Arkansas Fuel Co. was drilling at 250 feet in No. 4 Marshall, CWL SW SW, Section 1-24-9, and at 1,600 feet in No. 5 Marshall, CEL NE SW, same section. Roth & Faurott and the Mission Oil Co. had a rig on the ground for their No. 2 Cartwright, NE cor. SE NE, Section 1-24-9.

The Prairie Oil & Gas Co. was drilling at 700 feet in No. 9 Helman, C NE SW, Section 14-24-9. Rogers and others swabbed 280 bbls. in 9 hours from No. 1 Holverson, CWL NW SW, Section 23-24-9, following a shot of 160 quarts in

(Continued on Page 114)

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



Perfection Vapor Pressure Tanks used as Flow Tanks

Distributing Points

OKLAHOMA
Apperson
Bartlesville
Barnsdall
Blackwell
Bristow
Cleveland
Drumright
Duncan
Garber
Healdton
Henryetta
Holdenville
Hominy
Okemah
Okmulgee
Ponca City
Shidler
Sayre
Tonkawa
Tulsa
Wynona

KANSAS
Augusta
El Dorado
Florence
Garnett
Gridley
Independence
Madison
Russell
Sedan
Virgil

TEXAS
Amarillo
Breckenridge
Burkburnett
Corsicana
Graham
Panhandle
Ranger
Rising Star
Westbrook

WYOMING
Casper
Teapot

On the Trail of the Wildcatter

Whenever a wildcat test comes in an oiler, you will find our men right on the job in short order.

For it has ever been the aim of Black, Sivalls & Bryson to render the same efficient service to the wildcatter as to the producers in a proven field.

Illustrative of this statement is our record in the new pool in Russel Co., Kans. More than 90 per cent of the lease tankage there has been sold and erected by this organization. It's the same story in the new pool near Hutchinson, Kans.

We believe this "Being eternally on the Job," is one of the factors largely responsible for our position in the oil industry. It's taken for granted of course that Perfection tanks are the standard of the oil fields.

It will pay you to get in touch with our nearest representative. He will describe a plan whereby your lease tankage will not cost you a penny.

Black Sivalls & Bryson
INC.
BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

North Louisiana-Arkansas

By M. L. Vaughn

Smackover, declines 1,400 bbls., thought to have passed its peak. Unity Petroleum Co. gets largest well of week, El Dorado Field western extension, 2,500 bbls. Oakland district, Union Parish, disappointing. New test in La Salle Parish wildcat territory. Gasser spraying oil in Cotton Valley.

SHREVEPORT, La., July 7.—Despite the 14-cent rate granted by the Interstate Commerce Commission on rail shipments of oil from the Arkansas fields which went into effect last week, the object of which was to relieve congestion, an appreciable decline is noted in the output from that territory. Apparently, the peak of production in the Smackover Field has been reached, as there are no large wells being brought in and runs for the past week show a decline of 1,400 bbls. a day. Several of the pipe line companies are running only their own oil, having all they can take care of at the present capacity of their lines, and others are running their oil to storage, pending completions of lines now in process of construction.

Runs from the Louisiana Field last week averaged 54,130 bbls. a day, a decrease of 875 bbls. daily, and from the Arkansas fields 153,615 bbls., a total of 207,745 bbls., distributed as follows:

North Louisiana

Bellevue	5,155
Caddo light	10,890
Caddo heavy	2,650
Cotton Valley	2,605
De Soto and Red River	4,560
Elm Grove	855
Haynesville	19,315
Homer	8,100
Total	54,130

South Arkansas

El Dorado	12,680
Nevada County	1,180
Smackover light	37,940
Smackover heavy	99,515
Stephens	2,300
Total	153,615
Total both fields	207,745
Decrease	2,275

Union County Completions

Completions in the Union County area of the Smackover Field during the past week numbered 29, with seven failures and an aggregate initial production of 4,900 bbls. Only one big well was completed, the Unity Petroleum Co. getting a 2,500-bbl. gusher in the western extension of the El Dorado Field in Section 24-16-16, at 2,121 feet.

The Arkansas Fuel Oil Co. completed No. 3 Alphin in Section 11-16-15, pumping 90 bbls. at 1,986 feet.

Bond Trustee completed No. 2 Powell, Section 19-16-15, swabbing 300 bbls. at 2,078 feet.

J. W. Clark's No. 1 Alphin, Section 19-16-15, made a 135-bbl. pumper at 2,112 feet.

Crawford & Sebastian completed No. 3 Graves, Section 3-16-15, pumping 150 bbls. at 1,975 feet.

The Federal Petroleum Co.'s No. 4 Scott, Section 19-16-15, made a 150-bbl. pumper at 3,102 feet.

The Gulf Refining Co. completed No. 18 L. Werner, Section 5-16-16, pumping 15 bbls. at 2,260 feet, and No. 20 L. Werner, Section 6-16-16, flowing 95 bbls. at 2,264 feet.

The Haviland Oil Co. abandoned its test on the Clawson lease in Section 23-16-15, at 2,350 feet.

Holliday, trustee, completed No. 3 Goff, Section 6-16-16, flowing 250 bbls. at 2,260 feet.

The Humble Oil & Refining Co. completed Giller No. B-1, Section 11-16-15, flowing 90 bbls. at 1,985 feet, and No. 2 Hicks, Section 20-16-15, swabbing 100 bbls. at 2,070 feet.

The Lion Oil & Refining Co.'s No. 2 Burn, Section 17-16-15, made a 25-bbl. pumper at 2,065 feet.

The Marine Oil Co. abandoned No. 1 Murphy, Section 13-16-16, at 2,120 feet.

McFarland and others abandoned No. 1 Hearin, Section 13-16-16, at 2,082 feet.

Hill, Myers and others completed No. 1 McKinney, Section 19-16-15, pumping 100 bbls. at 2,077 feet.

The Natural Gas & Petroleum Co. abandoned No. 2 Tatum, Section 14-16-16, at 2,642 feet.

Olvey and others abandoned No. 3 Polk & Ezell, in Section 18-17-14, at 2,134 feet.

The Phillips Petroleum Co. drilled to 3,000 feet in its test on the Moore lease in Section 24-16-16, and the well was abandoned.

The Pure Oil Co.'s No. 1 Morrison, Section 21-16-15, is pumping 50 bbls. at 2,070 feet.

Ray and others abandoned their test on the Long lease, Section 28-16-14, at 2,170 feet.

John Seip and others completed No. 1 Hedgewood, Section 24-16-16, pumping 150 bbls. at 2,066 feet.

Simon and others got salt water at 2,320 feet in No. 1 Houston, Section 12-16-16, and the test has been abandoned.

The Starr Oil Co. completed No. 2 Burton, Section 25-16-16, swabbing 250 bbls. at 2,068 feet.

The Staves Oil Co. completed No. 2 Hicks, Section 20-16-15, pumping 50 bbls. at 2,067 feet, and No. 1 Moore, Section 25-16-16, flowing 250 bbls. at 2,063 feet.

The Sure Oil Co.'s No. 5 Smith, Section 24-16-16, is swabbing 100 bbls. at 2,082 feet.

The Texas Co. completed No. 1 J. G. Smith, Section 2-16-17, pumping 50 bbls. at 2,265 feet.

Wilroy and others abandoned No. 1 Goodwin, Section 23-16-15, at 2,014 feet.

Ouachita County Completions

Operations in the Ouachita County area of the Smackover Field during the past week resulted in the completion of 18 wells, all producing either gas or oil, and with an aggregate initial production of 812 bbls.

Dr. Clark completed No. 5 Berry, Section 24-15-17, flowing 50 bbls. at 2,297 feet.

The Denver Smackover Oil Syndicate completed No. 2 Stringfellow, Section 20-15-16, flowing 40 bbls. at 2,318 feet.

The Gulf Refining Co.'s No. 2 R. Bennett, Section 33-15-15, made 4,000,000 feet of gas and 5 bbls. of oil at 1,995 feet, and No. 9 Solmson, Section 29-15-16, is flowing 50 bbls. at 2,257 feet.

Hale and others completed No. 2 Brierton, Section 25-15-17, pumping 30 bbls. at 2,278 feet.

L. K. Hamilton's No. 2 Smith, Section 36-15-17, made a 30-bbl. pumper at 2,274 feet.

The Home Refining Co. completed No. 4 Anderson, Section 26-15-17, pumping 50 bbls. at 2,338 feet.

The Magnolia Petroleum Co. completed No. 2 Hardin, Section 20-15-16, flowing 60 bbls. at 2,287 feet.

The Majestic Smackover Syndicate completed McElroy No. A-2, Section 29-15-16, flowing 160 bbls. at 2,315 feet.

R. B. Nelson's No. 2 Jeffus, Section 25-15-17, made a 45-bbl. pumper at 2,317 feet.

The Palmetto Oil Co. completed No. 3 Reynolds, Section 25-15-17, pumping 30 bbls. at 2,287 feet.

Ramage and others completed No. 2 Jeffus, Section 25-15-17, pumping 45 bbls. at 2,325 feet.

The Standard Oil Co. of Louisiana completed No. 1 Powell, Section 34-15-15, pumping 70 bbls. at 1,957 feet, and No. 5 Umpstead, Section 32-15-15, making 5,000,000 feet of gas at 2,257 feet.

The Texas Co. completed No. 10 LaGrone, Section 30-15-16, pumping 60 bbls. at 2,292 feet; Solmson No. B-3, Section 32-15-16, pumping 37 bbls. at 2,255 feet, and No. 6 Stringfellow, Section 28-15-16, pumping 30 bbls. at 2,313 feet.

Cotton Valley, Webster Parish

The Oil Fields Gas Co. completed Hope Estate No. B-2, Section 24-21-10, making 30,000,000 feet of gas at 2,507 feet.

Union Parish Failures

The Oakland district in the north end of Union Parish gets one blow after another as drilling in this territory fails to bring in anything in the way of a commercial well. The Gulf Refining Co. got salt water at 2,195 feet in its second test on the Security Trust lease in Section 24-23-11, and the well will be drilled deeper.

The Urania Petroleum Co. has started its fourth well in the north end of La Salle Parish, where a wildcat test several months ago drew the interest of the oil fraternity to this territory when it blew in a big gas well, bridging over within a few hours of completion. The new test is in Section 20-10-10, in the northeast quarter of the southeast quarter of the section.

The Oil Fields Gas Co. completed a 30,000,000-foot dry gasser in its Hope Estate B-2, Section 24-21-10, which is spraying a little gas and may extend the Cotton Valley Field a mile south of the discovery well, drilled nearly a year ago by Doctor Webb.

The Estes well in the north end of Bossier Parish, bridged over after flowing for several days at the rate of 75 bbls. a day, but came back again apparently somewhat improved. About half way between the Estes well and the Lloyd Harris well, which came in two years ago with an estimated production of 3,000 bbls., the Atlantic Oil Producing Co. is about ready to test its No. 1 Bodcau in Section 24-23-12, at 2,704 feet. All the tests in this territory are being watched with interest as there is every indication of a pool of importance somewhere in this neighborhood.

The Louisiana-Texas Community Oil Corp. has drilled plug and tested casing in its test on the Rodessa Land Co. lease in Section 15-23-16, and is getting ready to test at about 2,775 feet. The well shows a 100-foot rise to the north from the first well which made a small producer, and all companies and operators of note have scouts watching the development. The test is in the north end of Caddo Parish, 5 miles north of the old Caddo Field.

Bellevue Field, Bossier Parish

The Standard Oil Co. completed No. 14 Wyche, Section 14-19-11, flowing 10 bbls. at 334 feet.

Claiborne Parish

Woodley & Collins got salt water at 2,900 feet in No. 1 Reynolds, Section 30-21-4, and the test was abandoned. The test is 13 miles east of Homer.

The Palmer Corp. abandoned its No. 2 Gladney, Section 28-19-5, at 2,247 feet.

Columbia County, Arkansas

In the Stephens district, the Atlantic Oil Producing Co. completed No. 5 Murphy, Section 14-15-20, pumping 20 bbls. at 2,133 feet.

The Gulf Refining Co. completed No. 2 W. Jones, Section 36-15-20, pumping 40 bbls. at 2,145 feet.

Hot Springs County

The Smith Refining Co. abandoned No. 1 Kilpatrick, Section 10-6-18, in paleozic rock at 451 feet.

Drilling Operations

Union County, Arkansas

Evidences of the general slump in drilling activity are seen in the Union County area of the Smackover Field where at the close of the week there were only 33 wells drilling, 18 rigs, 16 derrick and 3 new locations.

The Amerada Petroleum Corp. tested practically dry with a small showing of oil at 2,100 feet in No. 1 Wilson, Section 19-16-15, drilled to 2,107 feet and is standing with 1,500 feet of oil and a show of salt water.

The Arkansas Fuel Oil Co. is building derrick for No. 1 Dumas, Section 29-16-15 and rigging up to drill No. 4 Alphin, Section 11-16-15; Beggs and others are drilling at 1,760 feet in No. 1 Murphy, Section 36-16-16, Bradley & Cazart at 2,165 feet in No. 1 Miller, Section 21-17-15, and Broderick & Calvert are arranging to test 19 feet of sand at 2,360 feet in No. 1 Harell, Section 21-17-15.

Caldwell and others set 6-inch casing at 2,055 feet in No. 2 Burton, Section 25-16-16 and are rigging up to drill No. 3 Hancock, same section; the Cherokee Petroleum Co. is rigging up to drill No. 3 Burton, Section 25-16-16, and the Constantin Oil & Refining Co. is arranging to abandon No. 1 Morgan, Section 2-18-16, at 2,380 feet.

Crawford & Sebastian are drilling at 1,800 feet in No. 7 Giller, Section 11-16-15 and at 1,860 feet in No. 4 Graves, Section 3-16-15; J. E. Crosbie, trustee, set 6-inch casing at 2,000 feet in No. 2 Alphin, Section 29-16-15 and 10-inch at 90 feet in No. 2 Smith, Section 19-16-15.

Cross and others tested dry at 2,150 feet in No. 3 Polk & Ezell, Section 18-17-14, and are arranging to drill deeper; Dunn Oil Co. set 10-inch casing at 60 feet in No. 1 Burton, Section 25-16-16. Eason and others at 42 feet in No. 1 Hilton and rigging up to drill No. 2, Section 24-16-16, and the Federal Petroleum Co. set 10-inch at 63 feet in No. 2 Childs, Section 8-16-16.

East and others are rigging up to drill No. 1 Thompson, Section 5-17-15; Field Operators Oil Co. is drilling at 1,010 feet in No. 1 Kane, Section 12-16-16, and the Gilliland Oil Co. has derrick up for No. 3 Staples, Section 1-16-17.

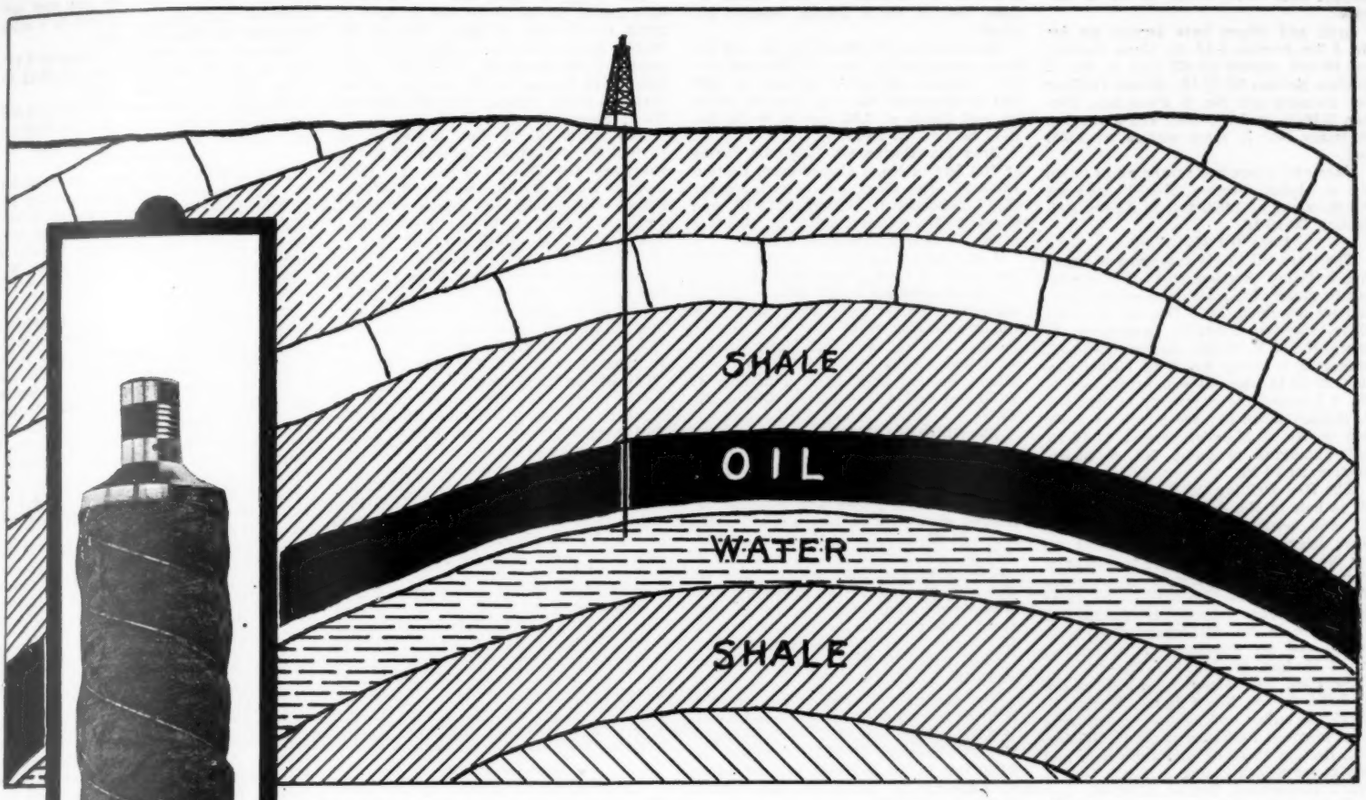
Gulf Co. Operations

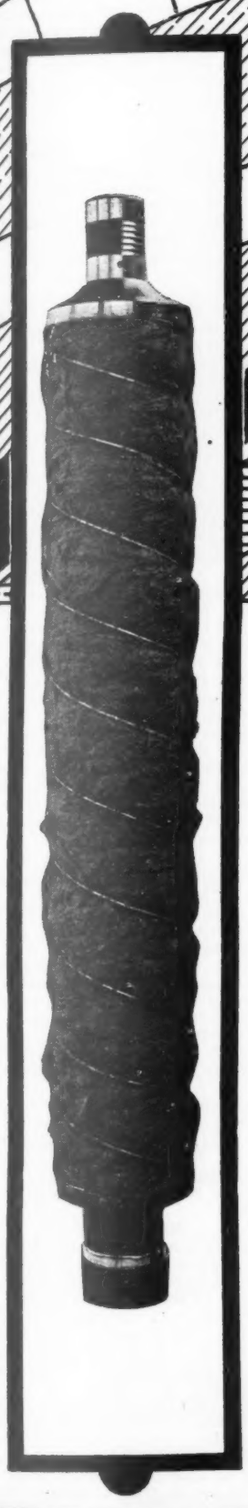
The Gulf Refining Co. set 6-inch casing at 1,975 feet in No. 2 Hedgewood, Section 13-16-16, arranging to pump No. 11 Murphy, Section 3-16-15; set 6-inch at 2,220 feet in No. 19 L. Werner, Section 6-16-16. Harrell and others are drilling at 2,700 feet in No. 1 Teele, Section 11-19-12.

Harris and others made a test at 2,088 feet in No. 1 Cook, Section 20-16-15 and had 150 feet of oil in hole; drilled 10 feet deeper and has 1,500 feet of salt water and waiting orders; Holliday, trustee, is rigging up to drill No. 4 Goff, Section 6-16-16; Hollyfield and others drilling at 1,370 feet in No. 2 Burton, Section 30-16-15.

The Humble Oil & Refining Co. is rigging up to drill No. 2 Adcock, Section 22-16-15; set 6-inch at 2,035 feet in No. 1 Burton, 10-inch at 120 feet in No. 2 and No. 3 and rigging up to drill No. 4, Section 25-16-16; drilling at 2,200 feet in No. 1 Cordell, Section 1-18-14, and set 10-inch casing at 110 feet in No. 3 J. S. Smith, Section 18-16-5.

The Imperial Oil & Gas Co. is bailing casing at 2,100 feet in No. 2 Smith, Section 29-17-14; Lanier and others set 6-inch at 1,970 feet in No. 1 Saxon, Section 16-16-16; Lion Oil & Refining Co. tested oil and salt water at 2,075 feet in No. 4 Allgulf, Section 17-16-15, and





"When a Feller Needs a Friend"

This well has been drilled through the oil into bottom water.

The plugging off of bottom water was at one time a serious problem, but today there is a really scientific plug available. If prompt action is taken, with a GUIBERSON Bottom Water Plug, before the hole has lost its shape, the operator can be certain of a tight and permanent plug.

This plug is set in neat cement. As it collapses its steel spirals expand laterally, and their sharp edges bite into the walls of the well around their entire circumference. The resulting grip is like that of a screw in wood. Friction is not depended on. The tight compression of the packing between the spirals combines with the cement to give an absolutely gas and water-tight seal.

FULLY Patented. At all leading supply stores.

THE GUIBERSON CORPORATION

Box 1106, Dallas, Texas

CALIFORNIA BRANCH: 1737 E. 7th St., Los Angeles

314 New Daniel Bldg., TULSA | **825 Mason Bldg., HOUSTON** | **506 Trust Bldg., NEWARK, O.**

GUIBERSON

BETTER BE SAFE THAN SORRY

plugged back to set casing to cut off salt water.

Lyell and others have derrick up for No. 5 fee, Section 3-16-15; Meek, trustee, set 10-inch casing at 65 feet in No. 2 Burton, Section 25-16-16; Mossis Drilling Co. cleaning out No. 6 Flenniken, Section 5-16-15 at 1,990 feet, and arranging to pump No. 7, same section at 1,995 feet.

Page and others are arranging to pump No. 4 Alphin, Section 23-16-15 and set 8-inch casing at 1,960 feet in Alphin A-1, Section 30-16-16.

Pure Oil Co. Work

The Pure Oil Co. is arranging to pump No. 5 Barry, Section 20-16-15; arranging to pump No. 1 Davis, Section 17-16-15; set 6-inch at 2,000 feet in No. 3 M. Hays, Section 21-16-15, arranging to pump No. 3 F. Hicks, Section 29-16-15, arranging to pump No. 6 L. Hicks, Section 20-16-15; set 10-inch at 65 feet in No. 1 Lindsay and rigging up to drill No. 2, Section 29-16-15; set 8-inch at 2,050 feet in No. 3 Massey, Section 17-16-15, and arranging to pump No. 8 Smith, Section 24-16-16.

The Ray Drilling Co. has 1,500 feet of oil in hole in No. 4 Hicks, Section 20-16-15, and setting 3-inch tubing at 2,052 feet; Riggs Drilling Co. has derrick up for No. 2 Rice, Section 6-16-16; Roxana Petroleum Corp. is arranging to pump Flenniken C-1, Section 8-16-15, at 1,985 feet; Rutledge, trustee, is drilling at 1,950 feet in No. 1 Carruth, Section 7-16-15, and set 6-inch at 2,220 feet in No. 1 Hodges, Section 1-16-17.

Sandford and others set 6-inch casing at 1,885 feet in No. 4 Berry, Section 8-16-15; Schuller and others are running sand pump at 2,095 feet in No. 1 Henderson, Section 19-16-15, and John Seip and others set 6-inch casing at 2,010 feet in No. 2 Hedgewood, Section 24-16-16.

Simon and others are rigging up to drill No. 1 Burton, Section 25-16-16; Standard Oil Co. set 6-inch casing at 1,900 feet in No. 5 Alphin, Section 2-16-15, setting liner at 2,016 feet in No. 8 Linglebach, Section 22-16-15, and bailing with a little showing of oil at 2,297 feet in No. 1 Saxon, Section 4-16-16.

Starke and others are drilling at 2,535 feet in No. 1 Little, Section 21-19-12; Staves Oil Co., rigging up to drill No. 2 Moore, Section 25-16-16; Sun Oil Co. testing 34 feet of sand at 2,115 feet in No. 3 Wilson, Section 19-16-15, and Sure Oil Co. set 6-inch casing at 2,050 feet in No. 7 Smith and 10-inch at 65 feet in No. 8 Section 24-16-16.

Sutherland and others are arranging to pump No. 2 Neely, Section 1-16-17; Tarver and others are bailing to test 7 feet of sand at 2,258 feet in No. 1 Stout Lumber Co., Section 1-16-17; The Texas Co. is arranging to pump No. 6 Cook, Section 21-16-15, testing 18 feet of sand at 2,122 feet in No. 3 Hedgewood, set 6-inch at 2,030 feet in No. 4, drilling at 1,250 feet in No. 5 and rigging up to drill No. 6, Section 24-16-16.

Umsted and others are drilling at 2,200 feet in No. 1 Cargile, Section 6-16-14; United Central Oil Corp. is rigging up to drill No. 1 Burton, Section 25-16-16 and drilling at 850 feet in No. 1 Craig, Section 15-16-16; Unity Petroleum Co. has derrick up for No. 7 Alphin, and rigging up to drill Alphin A-5, Section 24-16-16, and arranging to pump No. 1 Burton, Section 23-16-16.

The Vecino Syndicate set 6-inch casing at 2,040 feet in No. 2 Burton, Section 25-16-16; Waxler and others set 10-inch casing at 65 feet in No. 2 Moore, Section 24-16-16, and the Woodley Petroleum Co. set 6-inch casing at 1,940 feet in No. 3 Alphin, Section 24-16-16.

Ouachita County

Drilling activity in the North Smackover Field is steadily on the decline and at the close of the week there were only 59 wells drilling, 13 arranging to pump, 10 temporarily abandoned, 3 rigs, 22 derricks, most of which have been standing for some time, and eight locations.

Anderson and others set 6-inch casing at 2,250 feet in No. 3 fee, and have derrick up for No. 4, Section 26-15-17; Arkansas Drilling Co., setting 2-inch tubing to test 34 feet of sand at 2,290 feet in No. 2 Reynolds, Section 24-15-17, and Arkansas Invinciable Oil Co., fishing at 2,090 feet in No. 8 Patton, Section 31-15-16.

The Atlantic Oil Producing Co. set 12-inch casing at 102 feet in Brierton No. C-2, Section 24-15-17; 10-inch at 200 feet in Rowland No. C-1, Section 20-15-16, and 6-inch at 2,32 feet in Wells No. A-4, Section 25-15-17.

Bray Hawthorne set 15½-inch casing at 100 feet in No. 1 Copenhaven, Section 13-15-17; Dr. Clark has derrick up for No. 1 Schoolyard, Section 28-15-16, and Clark & Melat are drilling at 460 feet in No. 1 Murphy, Section 4-16-15.

J. E. Crosbie set 6-inch casing at 1,910 feet in No. 2 Berry, Section 33-15-15; E. Farris set 10-inch at 55 feet in No. 1 Anderson, Section 26-15-17; Finley & Stookey, rigging up to drill No. 1 Keller, Section 25-15-17, and the Forest Oil Co. set 6-inch casing at 2,230 feet in No. 2 Minor, Section 20-15-16, and drilling at 1,750 feet in No. 15 Cramer, Section 22-15-16.

The Gilliland Oil Co. set 10-inch casing at 80 feet in No. 3 McRea, Section 25-15-17, drilling at 2,065 feet in No. 1 W. A. Smith, Section 36-15-17; set 6-inch at 1,840 feet in Wells No. N-3, and 10-inch at 80 feet in No. N-4, and arranging to pump Wells No. S-2, Section 25-15-17.

Hunt and others are bailing to test 25 feet of sand at 2,280 feet in Anderson No. B-5, Section 23-15-17; Lanier and others are bailing to test 8 feet of sand at 2,283 feet in No. 2 Myar, Section 29-15-16, and Leon and others are drilling at 1,530 feet in No. 2 Patton, Section 32-15-16.

The Magnolia Petroleum Co. has derrick up for No. 1 Brown, Section 26-15-17; drilling at 2,265 feet in No. 3 Hardin, Section 20-15-16; drilling at 2,245 feet in No. 9 Smith and set 6-inch at 2,225 feet in Smith No. B-8, Section 31-15-16.

R. B. Nelson has set 6-inch casing at 2,245 feet in No. 3 Anderson and has derrick up for No. 4, Section 26-15-17; Owenwood Oil Corp. has 500 feet of oil in hole at 1,965 feet and arranging to pump No. 3 Snyder, Section 34-15-15; Phillips Petroleum Co. set 6-inch casing at 1,925 feet in No. 5 Hearnsberger, Section 33-15-15.

The Riggs Drilling Co. is swabbing with 2-inch packer in 10 feet of sand at 2,255 feet in No. 2 Myar, Section 29-15-16; Skelly Oil Co., testing 6 feet of sand at 2,306 feet in No. 5 Chandler, Section 19-15-16, and J. S. Smith, milling through 6-inch casing at 2,214 feet in No. 1 Shirey, Section 35-15-17.

The Southern Oil Co. is rigging up to drill No. 1 Hoffman, Section 22-15-17; Standard Oil Co. set 6-inch at 1,912 feet in No. 4 Griffin, Section 33-15-13; Staves and others set 6-inch at 2,302 feet in No. 2 Jeffus, Section 26-15-17, and Sun Oil Co. set 10-inch at 62 feet in No. 4 Berry, Section 24-15-17.

Sutton and others are drilling at 1,800 feet in No. 16 Hughes, Section 21-15-16; set 6-inch at 2,240 feet in No. 3 McElroy and drilling at 1,600 feet in Minor No. D-2, Section 20-15-16, and A. F. is arranging to pump No. 4 Fincher, Section 29-15-16, at 2,280 feet.

The Texas Co. set 6-inch casing at 2,245 feet in No. 9 LaGrone, Section 30-15-16; arranging to pump No. 6 W. A. Smith, Section 31-15-16, and No. 7 Snow, Section 30-15-16; set 6-inch at 2,200 feet in Solmson No. B-4, Section 32-15-16; drilling at 2,060 feet in No. 5 Stringfellow, and set 10-inch casing at 60 feet in No. 7 Stringfellow, Section 28-15-16.

Weaver & Smithwick are arranging to test at 2,133 feet in No. 1 Turbeville, Section 17-15-16; White and others set 4½-inch casing at 2,245 feet in No. 5 Watts, Section 30-15-16; Whittiken and others set 6-inch casing at 1,855 feet in No. 3 Anderson, Section 25-15-17; derrick up for No. 4, Section 23-15-17, and drilling at 1,900 feet in No. 1 Hodges, Section 26-15-17; Whittaker and others are setting 6-inch casing at 2,250 feet in No. 1 Shirey-Beg, Section 29-15-16.

Bossier Parish

The Atlantic Oil Producing Co. tested dry with a small showing of gas in 7 feet of sand at 2,705 feet in No. 1 Bodcau Lumber Co., Section 24-23-12 and arranging to drill deeper.

Davis & Burt will complete test on the Mercer lease, Section 22-16-12, as a 1,000,000-foot gas well.

The Estes well, No. 1 Bobcau Lumber Co. Section 15-22-12, in the north end of the parish, is flowing 250 bbls. of fluid through 2-inch tubing, 95 per cent salt water at 2,721 feet. The test is 8 miles northeast of Plain Dealing.

Skannal and others are testing at 2,475 feet in No. 1 Smith, Section 24-27-12 10 miles southeast of Shreveport.

Woodley & Collins are drilling at 1,500 feet in No. 1 Hamilton, Section 16-20-11, on the north shore of Bodcau Lake.

Bellevue Field

Bliss & Weatherbee have derrick up for No. 1-F Bliss & Weatherbee, Section 23-19-11. Olmstead and others set 6-inch casing at 245 feet in No. 8 Strange, Section 23-19-11. The Standard Oil Co. is drilling at 2,220 feet in its deep test, No. 1 McCloud, Section 13-19-11.

Caddo Parish

T. C. Adams and others are rigging up to drill No. 1 Johnson, Section 16-14-16, half way between Logansport and Bethany. The Arkansas Caddo Oil Co. has 4 feet of promising sand at 2,450 feet in No. 1 Nickerson, Section 30-19-15, 5 miles south of Mooringsport. Collins and others are drilling at 1,600 feet in No. 1 Levy Realty & Planting Co., Section 23-19-14, 8 miles south of Shreveport. The Crude Oil Co.'s No. 1 Alexander & Ledbetter, Section 27-16-14, is flowing salt water at 3,656 feet.

The Dixie Oil Co. is drilling at 1,020 feet in No. 8 Caddo Mineral Land Co., Section 23-21-15, drilling at 3,075 feet in No. 43 Roberthaw, Section 13-21-15, and set 6-inch casing at 1,500 feet in No. 61 Robertshaw, Section 13-12-15.

The Gulf Refining Co. is drilling at 2,450 feet in No. 216 Ferry Lake, Section 15-20-16, and at 885 feet in No. 218 Ferry Lake, Section 22-20-16.

The Lewis Oil Corp. has derrick up for No. 4 Caddo Mineral Land Co. in Section 24-22-15. The Louisiana Texas Community Oil Co. is drilling at 2,285 feet in No. 1 Rodessa Oil & Land Co., Section 15-23-15. The Mutual Oil Co. is bailing and celaning out at 1,625 feet in No. 10 Raines, Section 22-21-15. The Proven Production Co. is rigging up to drill No. 1 Agurs, Section 6-16-16.

Reynolds Oil & Gas Co. is drilling at 2,050 feet in No. 4 Jeems Bayou Hunting & Fishing Club, Section 9-20-16. Rowe-Daniels and others are rigging up to drill No. 1 Rodessa Oil & Land Co. in Section 22-23-16. Tarver & Barshara are drilling at 1,025 feet in No. 11 Crylane, Section 22-21-15.

Claiborne Parish

The Dixie Oil Co. is drilling at 1,560 feet in No. 1 Eastep, Section 20-20-7, 6 miles southwest of Homer. The El Dorado Chief Oil Co. is drilling in rock at 3,200 feet in No. 1 Gandy, Section 36-22-7, 8 miles southeast of Haynesville. The Forest Oil Co. is temporarily closed down at 2,000 feet in No. 1 Fields, Section 22-19-5, 5 miles northeast of Arcadia. The Standard Oil Co. is drilling at 2,405 feet in No. 1 Lloyd, Section 10-20-5, 10 miles southeast of Homer.

De Soto Parish

The Greyhound Syndicate is rigging up to drill No. 1 Pollock in Section 36-11-14. A. H. Tarver is drilling at 600 feet in No. 3 Matthews, Section 32-12-16. Ulrey and others are drilling at 2,810 feet in No. 1 Frost Johnson, Section 3-11-15.

Red River Parish

La Grande and others tested salt water at 1,735 feet in No. 3 fee, Section 2-14-12, and are arranging to drill deeper.

Cotton Valley District

The Fortuna Oil Co. is rigging up to drill No. 2 S. J. Merritt, Section 14-12-10, set 6-inch at 2,475 feet in No. 2 Merritt, and drilling at 600 feet in No. 3, Section 14-21-10.

The Gulf Refining Co. is drilling at 1,710 feet in No. 2 A. J. Hodges, Section 11-21-10.

The Humble Oil & Refining Co. set 10-inch at 1,130 feet in No. 3 Babb, and at 1,110 feet in No. 4, Section 14-21-10; temporarily abandoned at 2,595 feet in No. 1 A. J. Hodges, Section 12-21-10; has 2,000 feet of oil in hole with a little salt water at 2,560 feet in No. 2 A. J. Hodges; drilling at 465 feet in No. 3, Section 11-21-10; set 10-inch at 488 feet in No. 1 Merritt and drilling at 1,010 feet in No. 2 Section 14-21-10, and de-

(Continued on Page 112)

News of Mexican Fields

By George Blardone

TAMPICO, Mex., July 5.—The most important completion in Mexican Fields during the past week is Transcontinental Petroleum Co.'s No. 76, Lot 5, Cacalilao sector of the Panuco Field, rated 10,000 bbls. at 1,930 feet. This well is in the northern tip of Lot 5, near the boundary of the hacienda of Chapacao, an important property of Mexican Petroleum Co.'s Ebano holdings. Just east is International Petroleum Co.'s No. 5, Lot 5, drilled into salt water in July, 1922, at a depth of 2,442 feet, which proves how sharply structure there can dip. No. 76 is on the crest of a rise in this rolling terrain, the surface elevation being 225 feet, rather abnormal height for northern fields locations. Transcontinental will immediately drill some offset tests to this completion; and International will do the same.

Over in Lot 1, Cacalilao, Transcontinental also completed Nos. 98 and 101, each being rated good for 2,000 bbls. They are shallow wells, the first being finished at 1,610 feet; the second 10 feet shallower; Nos. 42 and 82, in Lot 4, same sector, were failures at 2,260 feet and 2,075 feet respectively. Rich Mex Oil Co., Lot 1, Cacalilao, has a 2,000-bbl. well in No. 67, finished at 1,770 feet. Nos. 48 and 93, same, were abandoned for dry holes at 1,833 and 1,800 feet respectively. No. 54, which has been shut down for orders at 1,730 feet will also be abandoned as salt water, was found to be seeping in at the bottom. La Corona Petroleum Co.'s No. 95, Lot 1, same, is called a completion at 1,710 feet, rated 700 bbls.; No. 100, Lot 4, is a dry hole at 2,005 feet; No. 92, Lot 1, the same at 2,280 feet. Mexican Sinclair Petroleum Co.'s No. 83, Lot 2, is a salt water well at 1,850 feet. Mexican Atlas Oil Corp.'s No. 1, Cacalilao, is a dry hole at 1,730 feet; and Mexican Eagle Oil Co.'s No. 20, same lot, is also a duster at 2,020 feet.

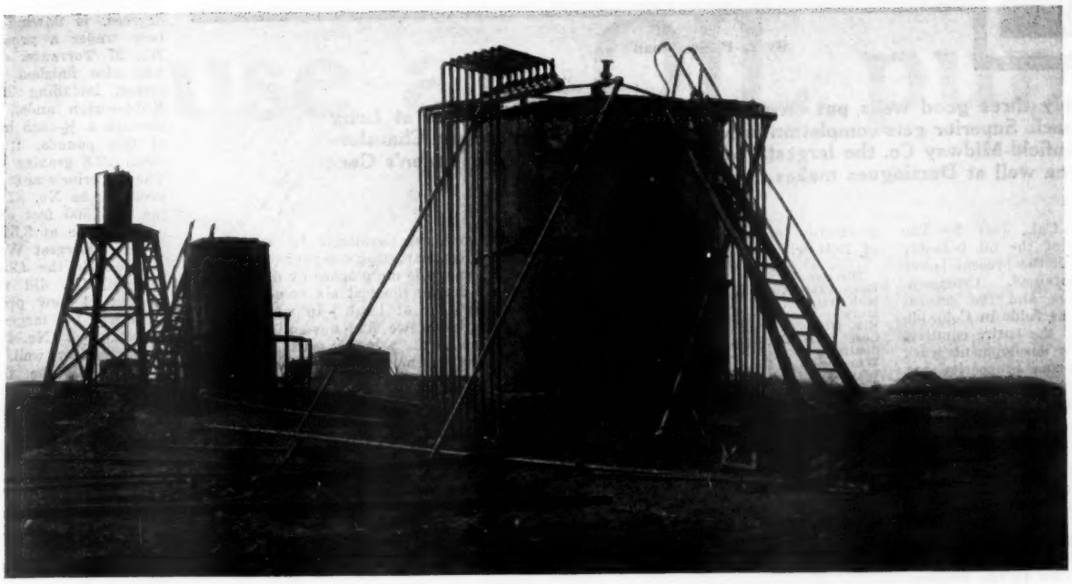
In the South Fields, Huasteca Petroleum Co., (Mexican Petroleum) No. 43 Cerro Azul is a completion at a sub-sea level of 1,206 feet. The well is evidently good for several thousand barrels, but no adequate idea of its production can be obtained until it is connected to field storage and a chance to gauge it is had.

In sum, the week resulted in 15 completions, 9 of which were failures, all belonging to the Cacalilao sector of the Panuco Field, and six are in the production column, five in the Cacalilao sector and one in the South Fields. New potential production added to the Cacalilao list is placed at 16,700 bbls.

Field Operations

Drilling operations in the Cacalilao sector of the Panuco Field during the week were as follows: La Corona Petroleum Co., in Lot 4: No. 101, cementing 8-inch at 1,200 feet San Felipe; No. 106, drilling in shale at 180 feet; Nos. 108 and 113, rigging; No. 114, moving in. In Lot 1: No. 3 is 1,210 feet in the San Felipe; No. 90, 1,295 feet in the same; No. 92, 2,280 feet in lime; No. 93, 1,910 feet in a similar formation; No. 99, 910 in shale; No. 102, 1,000 feet and No. 103, 890 feet, both in shale; No. 107, 110 feet in shale; and five other tests are rigging. International Petroleum Co.'s operations in Lots 4 and 5 are as follows:

(Continued on Page 112)



"carrying two pounds gas pressure"

THE COLINE OIL CO
OKLAHOMA CITY, OKLAHOMA

Ardmore, Oklahoma
April 8, 1924

Service Tank Company
Ardmore, Oklahoma

Attention, Frank McPhail,
Representative of Columbian Steel Tanks

Dear Sir:
The 500 barrel Hi-Pressure Steel Tank recently sold us has proved satisfactory in every respect. We have at this date 36 wells pumping into this tank, making, on the average, 500 barrels of oil going thru same.

We are selling to The Pure Oil Gasoline Plant 350,000 cubic feet of gas daily which is also going thru this tank. In addition, the gas which we are using to drill a deep test well is going thru the above mentioned tank. We are carrying at present two pounds gas pressure on this tank.

Yours truly,
Bert Warner
General Superintendent

Made of 12 gauge steel throughout—bottom, sides and deck. Bolted with ½-inch bolts. Trussed deck. More than ample interior reinforcement. Positive pressure and vacuum relief valves. The Columbian is a genuine Vapor Pressure Tank in every detail.

COLUMBIAN STEEL TANK COMPANY
EST'D 1894
1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

COLUMBIAN VAPOR PRESSURE TANKS

Truck Tanks
Oil Field Tanks
Bulk Station Tanks
Underground Tanks

Floating Tank Decks
Barrels, Buckets
Carrying Cans,
Funnels

Faucets, Valves
Oil and Gasoline Pumps
Plates, Sheets, Angles

California Field Operations

By L. P. Stockman

Only three good wells put on production at Torrance and three at Long Beach. Superior gets completion honors with two at Torrance and Chanslor-Canfield-Midway Co. the largest, No. 48, good for 1,082 bbls. Union's Gardena well at Dominguez makes new drilling records.

LOS ANGELES, Cal., July 5.—The paramount question of the oil industry today is how long will the present heavy production be maintained. Cromwell, Dominguez, Rosecrans and the several prospective oil and gas fields in Colorado are being watched by the entire country. New fields mean new development work and new drilling means prosperity not only for the oil business but for all the kindred industries and the effect is felt in practically every business, either directly or indirectly. The oil industry is watching California in particular and each drop in production is received with joy, as many operators are hoping for an early readjustment. California, and the normal markets supplied therefrom, can only absorb a certain amount of crude and, while there has been a substantial gain in consumption, due to the development of a broader market, it is still necessary to continue shipping crude, tops and refined oils to Atlantic and Gulf Coast ports. Were it not for the exorbitant amount of gasoline and tops on hand the industry in California might be able to handle the situation without shipments to the East Coast.

Stocks of Gasoline

There are at present 272,044,183 gallons of gasoline on hand at refineries and 13,874,993 bbls. of tops, a source of gasoline supply. If we accept a conservative gasoline recovery of 60 per cent from the tops, which vary in gravity from 40 degrees to 60 degrees, the total amount of gasoline on hand and stored as tops is approximately 621,694,007 gallons. In addition to the tops, there are stored in the field, pipe lines, tanks and refineries in California 37,547,642 bbls. of light crude that is above 20 degrees A. P. I. The gasoline recovery from this will probably average somewhere in the neighborhood of 22 per cent. This source of gasoline supply would add 346,940,202 gallons and bring the total amount of gasoline stored and available by distillation of tops and light crude to 968,634,219 gallons. The gasoline consumption (including tanker shipments to the East Coast and exports) during May was 112,778,310 gallons, or 3,638,010 gallons a day. Without taking into consideration the 48,089,302 bbls. of heavy crude and residuum on hand, it would take over 266 days to exhaust the present stocks of gasoline stored as such and that which can be recovered from the tops and light crude on hand.

California has been storing gasoline in varying quantities for the past two years and it is needless to say that the present storage of this commodity is the highest on record. During May, 9,567,614 gallons were added to stocks, but it is believed that with the summer season already there will be a draft on gasoline stocks during June and a deficit in crude stocks during July. With this condition existing it is but natural for the entire industry to concern itself with California's future, especially as regards what effect it will exert on the eastern markets.

Production at Close of 1924

A check just made, taking into account the economic condition prevailing and the condition of each company, reveals that the State production at the close of the current year will be approximately 582,700 bbls. It is estimated that the daily production of each district at the close of 1924 will be as follows:

District—	Jan. 1, 1924	July 1, 1924	Dec. 31, 1924*
Kern River	19,000	19,000	19,000
McKittrick	5,700	5,500	6,000
Midway-Sunset	85,000	104,000	110,000
Elk Hills	22,500	37,000	40,000
Lost Hills-Belridge	3,500	3,300	7,000
Coalinga	17,500	36,000	35,000
Wheeler	750	800	5,000
Watsonville	58	55	50
Santa Maria	8,200	7,250	9,000
Summerland	145	145	150
Ventura-Newhall	9,125	11,000	11,000
Los Angeles - Salt Lake	1,150	2,500	2,500
Whittier	2,000	2,100	7,000
Fullerton	9,800	12,000	15,000
Coyote	4,150	19,000	25,000
Santa Fe Springs	150,000	60,000	40,000
Montebello	17,000	16,500	16,000
Richfield	13,350	12,250	15,000
Huntington Beach	65,000	45,000	35,000
Long Beach	230,000	160,000	95,000
Torrance	37,000	57,000	40,000
Dominguez	1,500	10,250	30,000
Rosecrans	.....	750	20,000
Total	704,428	621,400	582,700

*Estimated.

It will be noted that practically all of the principal fields at present are scheduled for drops. Long Beach, it is believed, will drop from 160,000 bbls. at present to 95,000 bbls., while Santa Fe Springs is believed due for a decline of 20,000 bbls. Huntington Beach and Torrance are also listed as registering decreases. Rosecrans, Dominguez, Wheeler Ridge, Whittier and Coyote should show increases due to added development work, as the result of new discoveries and the opening up of new deep productive zones. The estimate given for Rosecrans is subject to future developments and allowance must be made for conditions unknown at present and the limited knowledge of the field's productivity. An average of 750 bbls. per well has been used but if the southern part of the field proves to be a very prolific one, the figures used will undoubtedly prove to be too low.

Storage of Crude

The total storage of crude, residuum and tops in the field, in pipe lines, at tank farms and refineries was 99,511,937 bbls. on May 31 last and, while one or two of the major companies are building additional storage facilities many have sufficient space available for emergency use. Most marketing companies should be able to provide more space by drawing on stocks during the last six months of the current year at least. In summing up the situation we find a smaller production imminent, a larger consumption for the next few months and no particularly threatening areas except possibly Dominguez and Rosecrans, which in any event can not attain serious proportions until the summer of 1925, by which time nearly all of the companies should be in a better condition. In addition to this anticipated improvement there are more outlets for crude today than there were when Long Beach, Huntington Beach and Santa Fe Springs were belching forth their enormous output of oil and gas. The Pan-American, Petroleum Midway (California Petroleum) and the Julian Petroleum have all laid lines to tidewater since the recent heavy overproduction and should be of material assistance if another similar situation should arise. The Pan-American, in addition to laying many miles of pipe lines, erected a refinery at Watson and entered the local retail markets. Taken all in all conditions look promising and, while no price changes are probable for some time, the industry in California is in a sound condition.

Torrance

The number of wells completed in California during the past week was comparatively small and practically none of the principal fields showed any large number of new producers. There were only three good wells put on production at Torrance and three at Long Beach, although there were several other smaller ones finished in each district. During the past year the unusually heavy development work at Long Beach, Santa Fe Springs and Torrance resulted in the addition of many new producers each week but, with the tapering off of development work in the latter field and a falling off of new work in the two former districts, the number of new wells added each week has grown very much smaller. The Superior Oil Co. carried off completion honors at Torrance during the past week by bringing in two flowing wells, Nos. 27 and 35 on its Torrance lease. They were both completed in record time and finished at practically the same depth. No. 35 Torrance was drilled to 3,824 feet and finished with a 6¼-inch liner including 275 feet of 60 mesh Kobe screen. The initial output, 920 bbls., which is clean and tests 20.4 degrees, is flowing through a 1½-inch bean under a pressure of 610 pounds. No. 27 Torrance, drilled to 3,828 feet, was also finished with a 6¼-inch oil string, including 220 feet of 60 mesh Kobe screen landed on bottom. Flowing through a ½-inch bean under a pressure of 600 pounds, it made 482 bbls. of clean 22.8 gravity oil on the first test. The Superior's next two completions will probably be No. 37 Torrance now drilling at 3,500 feet and No. 38 Torrance making hole at 3,520 feet.

Largest Well of Week

Although the Chanslor-Canfield Midday Oil Co. did not add the largest amount of new production, one of its wells was the largest individual completion finished. No. 48 Torrance, the company's banner well, was good for 1,082 bbls. during the first 24 hours from 3,725 feet. It was finished with an 8¼-inch oil string landed on bottom, including 450 feet of 60 mesh screen. The well is producing an unusually high gravity oil for the east end of the field, testing 26.6 degrees. Flowing a ¾-inch bean, a pressure of 320 pounds has been built up. No. 24 Torrance, the Chanslor-Canfield Midway Oil Co.'s other completion was rather unsatisfactory. It was put on the beam at 3,770 feet but the best it would do was 15 bbls. of dirty 17 gravity oil, which, so far, has failed to clean up. It is quite probable some additional work will be done on the well unless the cut is reduced very substantially during the next week. The Sentinel Oil Co.'s No. 9 Torrance was only a comparatively small well upon its completion but the oil was unusually clean, only a trace of water being present. Drilled to 3,823 feet and finished with a 6¼-inch oil string, including 225 feet of screen casing, the well came in flowing 185 bbls. of 18.6 gravity oil. No. 8 on the same lease has been finished at 3,835 feet and should be on production within a few days as it is scheduled to be bailed tomorrow.

The Petroleum Midway (California Petroleum) has been experiencing a great deal of water trouble with No. 1 Crocker and it is evident from the production test made early in the week the trouble has not been overcome. No. 1 Crocker was originally drilled to 3,575 feet but later plugged back to 3,521 feet. Upon being put on the beam it pumped 30 bbls. of fluid, nearly 80 per cent water and sand. The company's No. 1 Logan is looking fairly good at 3,895 feet and it would not be surprising if a 250-bbl. pumper was brought in some time during the next 10 days. Collins, Morrison & Dean's well No. 1, which has not been looking very well, started off flowing at the rate of 85 bbls. a day from 3,849 feet, and, while the output is unusually small, the showing was much better than expected. Keefe & Risden completed No. 1 Gildner at 3,778 feet and it will probably be washed in next week.

Building Rigs for Eight Wells

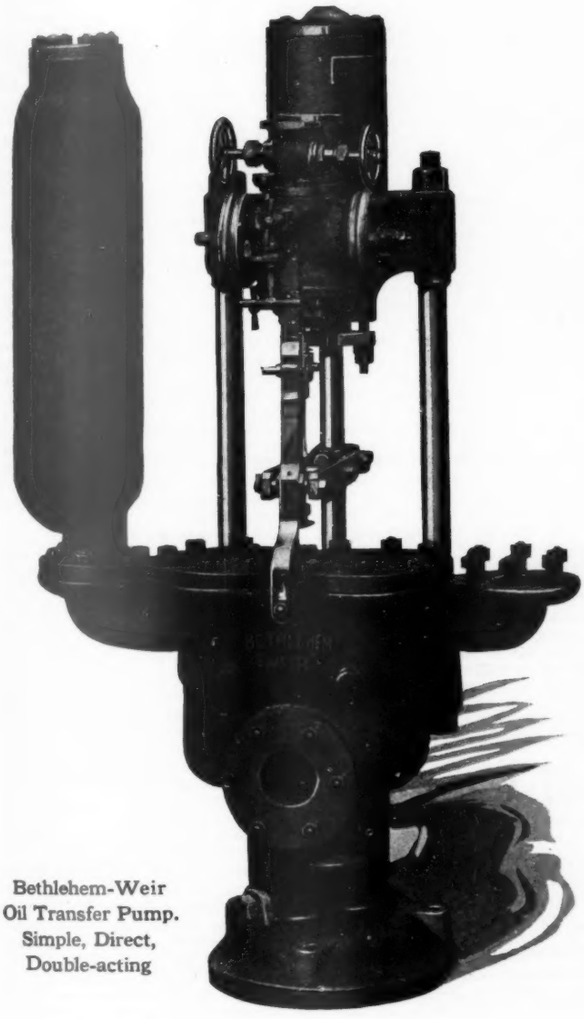
The Pan American is losing very little time getting its new development work under way and has started building rigs for eight of twelve new wells to be drilled immediately. The new wells being started are Nos. 1, 2, 3, 4, 5, 6, 15 and 16 on the Kleinmeyer lease, offsets to holes being drilled by the Superior and Consolidated Oil companies. The Pan American's next completion will probably be No. 2 Hub, now standing cemented at 3,620 feet. The Shell Oil Co. put No. 1 Keystone, an east side well, on the beam after deepening it from 3,815 to 3,845 feet but it made a very poor showing. The outcome seems to indicate that the sands in this well are not very heavily saturated and the company will be very lucky if even a small producer is secured. In contrast to this well, the Shell's No. 12 Kettler at 3,880 feet, No. 13 Kettler at 3,553 feet and No. 14

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

Swift Eagle, June 23, New York, crude	80,192
Agwipond, June 23, New York, crude	79,063
Hampton Roads, June 23, New York, crude	72,452
Alden Anderson, June 23, Fall River, crude	76,498
J. W. Van Dyke, June 24, Philadelphia, crude	77,401
W. C. Teagle, June 26, New York, crude	108,313
Agwihavre, June 23, Baltimore, crude	95,511
Betterton, June 26, New York, crude	82,727
Cape Ann, June 23, New York, crude	70,592
Tustem, June 27, Philadelphia, crude	75,744
Byron D. Benson, June 27, New York, crude	77,906
Fred. W. Weller, June 27, New York, crude	117,373
Coastwise	
Lubrico, June 23, Richmond, crude	82,711
La Purisima, June 24, San Diego, refined	12,060
Lebec, June 25, Seattle, fuel	70,092
Charlie Watson, June 26, San Diego, refined	32,150
Richmond, June 27, Portland, fuel	61,740
Lubrico, June 27, Richmond, crude	81,744
LaPurisima, June 28, Seattle, refined	60,092
Exports	
Albertolite (Br.), June 23, Vancouver, crude	75,160
Liebre, June 25, Japan, crude	65,490
F. Q. Barstow, June 25, Halifax, crude	116,129
La Crescenta (Br.), June 27, Argentine, fuel	59,504
Baltic, June 28, Montreal, crude	87,595
Tascalusa (Br.), June 28, China, refined	63,881
From San Francisco	
Wm. F. Herrin, June 24, Honolulu, fuel	55,406
J. A. Moffett, June 25, Seattle, fuel	63,059
Dilworth, June 25, Manila, fuel	60,142
Stockton, June 27, Seattle, fuel	76,409
W. S. Porter, June 27, Seattle, fuel	54,630
From Port San Luis	
Coalinga, June 25, Oleum, fuel	70,148

To pump oil, use an OIL pump!



Bethlehem-Weir Oil Transfer Pump. Simple, Direct, Double-acting

A pump originally designed and built to handle water cannot handle oil satisfactorily, and should not be expected to.

Bethlehem-Weir Oil Pumps are built expressly to handle oil. They are designed as oil pumps, and their design is based on data obtained during years of experience in building and testing pumps for this duty.

Probably the most vital part of an oil pump—or of any reciprocating pump—is the valves. The valves of Bethlehem-Weir Oil Pumps are designed especially for handling oil. The valve areas, ports and passages, being larger than usual, provide for the handling of heavy viscuous oils.

These pumps are double-acting. They run at very low speed, and their smooth, quiet operation, without shock or jar, means less wear and tear, reduced liability to breakdown, longer life.

Bethlehem-Weir Oil Transfer Pumps

These pumps are especially designed to handle oil. Large valve areas, ample ports and passages are provided. There are few wearing parts.

Bethlehem-Weir Heavy-Duty Oil Pumps

For handling large volumes of oil. Due to their large valve areas, these pumps, of the vertical type, can handle heavy oil at a lower temperature than is otherwise possible.

Bethlehem-Weir Fuel Oil Service Pumps

Of the horizontal, direct double-acting type. These pumps are used in connection with oil burning systems for forcing the oil through the burners. They can handle satisfactorily the gaseous mixtures that accumulate in the suction pipe when starting up.

BETHLEHEM SHIPBUILDING CORPORATION, LTD., BETHLEHEM, PA.
GENERAL SALES OFFICES: 25 BROADWAY, NEW YORK CITY
Sales Offices: Boston, 141 Milk St.; Philadelphia, Widener Bldg.; Wilmington, Foot of West St.; Baltimore, Gay and Lombard Sts.; San Francisco, Matson Bldg.

BETHLEHEM —WEIR *Oil Pumps*

Kettler at 3,560 feet are looking very good and at least 350-bbl. wells are expected when they are put on production during the next two or three weeks. On the March lease, No. 6 at 3,570 feet, No. 8 at 3,540 feet and Nofl 9 at 3,560 feet are also looking good and should be good for 300 bbls. each upon completion. The completion of these drillers, together with several other likely producers, should increase the Shell's production at least 2,000 bbls. a day.

The Standard Oil Co. did not succeed in actually placing any wells on production during the week but No. 16 Marble Fee and possibly No. 1 Sentinel-Joughin, should be tanking oil within a few days. The company's No. 1 Ellinwood is still in a rather unsatisfactory condition, and the daily output of 120 bbls. is cutting about 50 per cent water. Officials of the Standard were agreeably surprised with the showing No. 1 Weston is making. The brown shale at 3,737 feet is showing oil and gas in increasing quantities and the prospect of securing a commercial producer appears to be a little better than the outlook two weeks ago. The Union Oil Co. drilled a deep test on this lease but never had a showing. The latter's well, however, was a mile or so farther away from production.

Dominguez

Both the Birch Oil Co. and the Marland Oil Co. recovered from their fishing jobs at Dominguez during the week and each drilled ahead. The Birch well has been held up for over a month with a fishing job which developed at 2,723 feet but as soon as the fish was recovered drilling was resumed and the company now has 3,165 feet of hole. The present formation is a brown shale streaked with sand which logs about 500 feet shallower than the Chase Oil Co.'s test five or six hundred feet north. The odds are somewhat against the Birch to secure production, although there is a remote possibility. The Marland Oil Co. was only held up for a short time but upon the successful conclusion of the fishing job the hole was deepened from 2,600 feet to 3,260 feet. The General Petroleum's single drilling well in this field is going ahead at 5,900 feet in a sandy shale so far devoid of oil or gas.

Both the Union and Snell Oil companies have drillers which should be finished within two or three weeks and as a result the field production will show an increase. The Shell spudded in No. 2 Childs in the extreme eastern part of the field which is standing cemented at 993 feet. No. 1 Childs at 3,889 feet, as well as two or three wells on the Reyes property, look like early completions. The Union has one well on the Carson lease and several on the Hellman lease which should be brought in shortly. The company's No. 1 Gardena, a little over a mile west of the General Petroleum's properties in the northern part of the field, is still dry at 6,930 feet and, although the chance of securing commercial production is nearly out of the question, a thorough test will be made before its abandonment. The Standard Oil Co. carried No. 2 Brownrigg-Keller, in the Santa Fe Springs Field, to 7,212 feet before abandoning it. Unless mechanical trouble develops, the Union will probably carry No. 1 Gardena to at least this depth before quitting.

No Drilling Records

Several rotary drilling records have already been established by the crew of No. 1 Gardena. Notwithstanding that the hole is close to 1½ miles below the surface of the earth, casing has only been carried to a depth of 3,050 feet. A string of 11-inch was set at this depth and drilling proceeded practically 4,000 feet farther without casing. This is reported to be the largest amount of open hole below a cemented string of casing on record. In the Brownrigg-Keller well the Standard carried casing practically the entire depth. The size of the bore in No. 1 Gardena is also believed to be a record feat. An 8-inch bit is being used which makes the diameter of the hole the largest of any deep test in oil history. The hole was started July 30, 1923 and the present depth has therefore been attained in less than a year. The drilling record of the well is no less remarkable than its depth as it has yet to face a serious fishing job. Since passing the 6,000-foot level, 301 feet of hole were made in one week. The Superior Oil Co. has made unusually good time with No. 1 Carpenter, a few locations east of the Shell's No. 1 Childs, and has made 3,200 feet of hole in two weeks' drilling time. The Associated Oil Co. has not yet spudded in on the De Fracis lease, about a half mile to the south, but is setting the boilers and should begin drilling soon. The United shows 3,750 feet of hole in No. 1 Dominguez and is progressing satisfactorily. If any production is secured by either the United or Associated it will probably be small and deep.

Rosecrans Field

One new operator, J. B. Dabney, entered the Rosecrans area during the week and his well on Lot 11, Block 21 in the Athens Townsite will provide an interesting test. C. C. Julian succeeded in getting 30 lot owners to agree to terms on a community lease and the property, embracing 15 acres, calls for four wells and a sixth royalty. Julian's first well on this lease, to be known as No. 1 Athens Community, is already under way. The California Rig Builders erected the rig in 17 working hours, setting what is believed to be a new record for rig construction in southern California. Julian's other well in this territory is drilling ahead in a sticky shale at 1,090 feet.

The Superior Oil Co.'s No. 1 Maxwell is perhaps the most interesting well in the Rosecrans area today. It offsets No. 1 Rosecrans, which has caused the Union so much trouble because of water. Keck has stated it should be an easy matter to secure a water shut off. He did not have the success which he anticipated however as the first cement job was unsuccessful and the well is again being cemented at 4,145 feet. The Union is having unusually hard luck with No. 1 Rosecrans and on top of the failure to get a shut off in the last cement job, a drill collar and bit was lost at 3,958 feet. In addition the casing seems to have gone bad, and it would not be surprising if the well was finally abandoned. The company spudded in No. 2 on the same lease and is building a rig for No. 3. No. 1 Chandler is being cleaned up after the recent gas blowout, while No. 1 Gray is drilling at 2,307 feet and No. 1 Padelford at 2,935 feet. No. 1 Hursey and No. 1 Zins are both standing cemented, the former at 1,194 feet an dthe latter at 1,197 feet. The General Petroleum spudded in No. 1 Vaughn, the first of three wells to start actual drilling, and is making hole at 910 feet. The company is rigging up No. 1 Amestoy and preparing No. 1 Welcome. The Associated Oil Co. ran into another fishing job and No. 1 Brockley is held up at 3,450 feet as the result of the loss of several hundred feet of drill pipe. A string of 11-inch was landed in No. 1 Higgins at 3,510 feet. The United States Royalties well No. 23 will probably be the center of interest during the next few weeks while both the Superior's No. 1 Maxwell and the Union's No. 1 Rosecrans are held up because of water and mechanical difficulty. The United States Royalties secured a fairly good showing at 4,136 feet and the result of the company's operations may have a decided effect on the immediate future of the field. The Sandberg Petroleum Co.'s No. 1 Steele at 3,700 feet, Morrison's No. 1 Swesey at 4,110 feet and the St. Helens No. 1 Rowell at 3,810 feet are also entering the interesting stage. The Barnsdall Oil Co.'s No. 1 Rosecrans, closer to present production, is drilling in a sandy shale at 3,116 feet. The company has erected a rig for No. 1 O'Dea but has not yet spudded in.

Long Beach

The Shell Oil Co., by bringing in two new wells and recompleting another after redrilling and deepening it, easily carried off the completion honors at Long Beach durng the week. With the exception of the Shell's contribution to the field's list of producers, only two other wells were brought in, both small. On the Patton-Wilson property the Shell brought in No. 3, good for 1,860 bbls. from 4,801 feet. The output, which tests 26.7 degrees and shows a cut of 1 per cent, is flowing through a 1-inch bean under a pressure of 420 pounds. The Shell's two remaining wells were on the Alamitos lease, No. 4-A, redrilled and deepened from 4,437 feet to 4 845 feet, and No. 19, a new well brought in from 4,800 feet. The former, flowing through a 7/8-inch bean under a pressure of 510 pounds, made 1,190 bbls. of 23.4 gravity oil during the first 24 hours, while the latter, flowing through a ¾-inch bean under a pressure of 365 pounds, produced 686 bbls. of clean 22.9 gravity oil. The Shell's next two completions will probably be No. 1-A Babb, completed at 4,950 feet and No. 5 Nesa at 4,891 feet. The Henderson Petroleum Co. redrilled and deepened No. 1 Lekas from 3,952 to 4,762 feet and secured a small flowing well. The initial production, approximately 200 bbls. has not yet cleaned up and there is still some question what the outcome will be. The Marine Oil Co. completed well No. 22 with a 4½-inch liner landed on bottom at 5,300 feet but is having difficulty in pumping. The maximum which the well has attained is about 20 bbls. of dirty oil. Juding from indications, the Marine will not be successful in securing more than an ordinary pumper at best. The San Martinez Oil Co. put No. 2 Fry on a production test at 4,059 feet and, while the well had good indications and made several good showings, it does not seem to have the necessary pressure to sustain an even flow. It is possible that before the test is completed sufficient gas pressure will be built up to insure a flowing well. At least a 250-bbl. producer should be secured. The A. T. Jerkins Syndicate completed well No. 11 at 4,800 feet after landing a 6¼-inch oil string at 4,798 feet. The initial output, 590 bbls. of 24.6 gravity oil, shows a cut of 2 per cent. The General Petroleum Co. is still drilling ahead in No. 4 Jonah-Jones and at 4.936 feet over 700 feet of oil sand had been penetrated. Barring mechanical trouble, this will be the company's next producer and indications point to at least a 1,000-bbl. flowing well. The Bartholomae Oil Co. drilled out the cement in No. 4 at 5,056 feet and when the job was wet operations were suspended pending the completion of No. 3 now drilling in a hard sand at 4,350 feet. The Ramsey Oil Co.'s No. 1 McNaughton completed at 4.540 feet after being plugged back from 4,578 feet, did not make a good producer and the tubing is being pulled in order that it may be cleaned out. The United Oil Co. is still trying to finish No. 1 Bixby and is testing for a water shut off after plugging back from 5,325 feet to 4,445 feet. It is doubtful if the company can successfully completed this well as a commercial producer.

Santa Fe Springs

Practically the only development work of interest at Santa Fe Springs at present is the attempt of the Shell Oil Co. to secure deep production by opening up a sand below the Meyer zone. The company's test, No. 6-A Slusher, which is drilling ahead in a sand streaked with shale at 5,900 feet, has not yet shown any encouragement or indications that a deep sand might be developed. The General Petroleum Co. is making preparations to abandon No. 1 Jalk, a former small well at 4.600 feet, as it has ceased to be a profitable producer. The company's No. 89 Santa Fe was put on the beam after being plugged back from 4,700 feet to 4.405 feet, but it failed to pump. The Federal Drilling Co.'s well No. 1 is still showing a large cut, nearly 30 per cent. It is flowing intermittently from 4,576 feet. There were four wells put on production at Huntington Beach during the week, two new, one recompletion and one cleanout. The Standard Oil Co. finished two new wells, No. 4 Surf and No. 23 on Lease B. The former was a 135-bbl. pumper of 20.9 gravity oil, while the latter is listed as a 140-bbl. well producing 25.2 gravity oil. No. 4 Surf was brought in from 4.338 feet after being plugged back from 4,351 feet. No. 23-B was put on the beam at 3,900 feet. The company is reaming No. 1 Orange County Title at 4.865 feet preparatory to setting a string of 6¼-inch casing in order to test out the showing found at 5,510 feet. Because of the extreme depth it is doubtful if commercial production will be secured. On Lease D, the company is considering abandoning well No. 4 at 3.679 feet and it is believed it will be dismantled soon. The recompletion stands to the credit of the Pacific Petroleum. The company deepened well No. 9 from 2,948 feet to 3.260 feet and secured a 300-bbl. pumper producing 21.6 gravity oil which showed a cut of 3 per cent. The Associated Oil Co. takes credit for the cleanout job by returning No. 41 Miley-Keck to production. It is pumping 50 bbls. from 3.410 feet, although the bottom of the hole was originally 4.475 feet. The Globe Petroleum Co. is not meeting with

(Continued on Page 116)

News from Fields of Canada

By Victor Lauriston

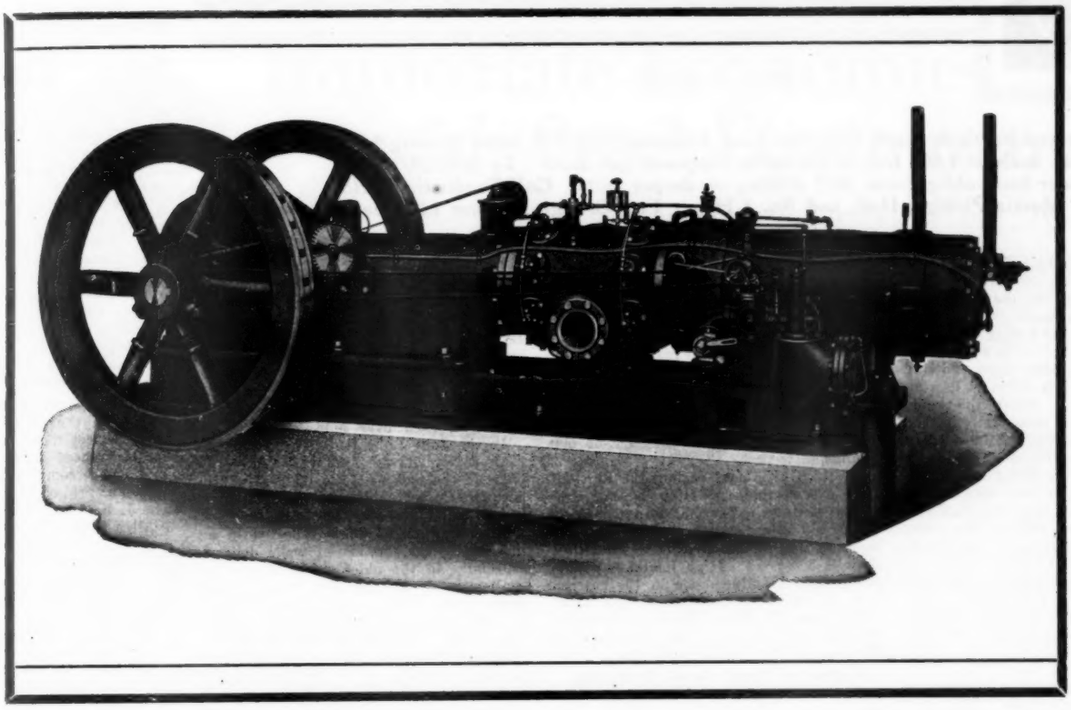
CHATHAM, Ont., July 5.—In the Canadian West, the Canadian Western Natural Gas Co. No. 4 in the Foremost Field, southern Alberta, came in this week a big gasser with an estimated open flow production of 20,000,000 feet a day. This is the biggest producing well yet drilled in the Foremost Field, which was developed last year by the Candian Natural Gas Co. The aggregate open flow of the four wells now completed in this field is 49,000,000 feet a day. The wells are shut in, but work has been commenced on a 10-inch line about 35 miles in length to connect the field, south of Foremost, with the company's main pipe line from the Bow Island Field to Calgary.

In the Pakowki Lake district, south of Medicine Hat, the Sanctuary Oil Co. (Thompson Syndicate) outfit was wrecked by an explosion of gas on June 26, causing the instant death of A. D. Brown, field manager. The explosion was apparently due to a sudden rush of gas becoming ignited. The derrick was blown clear off the well site and pretty well demolished, and the casing in the hole was lifted several feet. At last reports the gas was still burning. Mr. Brown, who had previously drilled in the Ohio and California fields, took charge of the Pakowki Lake test last July. The Pakowki Lake test, on Section 9-5-8w5, was down about 2,900 feet and the casing had been cemented to shut off the water. Efforts will be made to put the well in shape for further drilling. This is stated to be the first fatality to occur in drilling operations in the Canadian West.

Sweetgrass District

In the Sweetgrass district, east of Coutts, some additional drilling is in prospect to test out the structure on which the Canadian Oil & Refining Co. drilled its big Rogers-Imperial gasser on Section 29-1-11w4. The Canadian Oil & Refining Co. is making a new location for a deep test for oil about three-quarters of a mile from its gasser. A rotary outfit will be used for this test, which is somewhat lower on the structure where, it is believed, it will miss the heavy gas flow and be likelier to get oil. No. 1 well got its main gas flow at 2 528 feet. A gas line will be laid to No. 1 well to supply fuel for the new drilling. It is reported the Anglo-Wainwright Oil Co. of Vaucouver, B. C., which is being financed by British capital and was planning to drill in the Irma-Wainwright Field has shifted its attention to southern Alberta and will start a test this month on a location a short distance north of the Rogers gasser. A rotary outfit is being moved in from the Smackover Field for the test. The J. H. Smithers Co. of New York are reported to have contracted to drill on the acreage due east of the Rogers well, controlled by Jack

(Continued on Page 102)



Dependable compressors for oil companies

OIL companies, large and small, are installing Chicago Pneumatic Air Compressors for transferring oil and for construction work around refineries and in the field. One oil company in the middle west has installed three belt-driven compressors — one, a large duplex unit — a steam engine, five large gas engines, and an oil engine for direct connection to a triplex pump—*all* manufactured by the Chicago Pneumatic Tool Company. Reliable and positive in operation, Chicago Pneumatic Compressors are ideal for supplying oil field air requirements. The cost of *your* field construction and refinery transferring operations will cease to be problems if you install Chicago Pneumatics.

Over 500 distinct types and sizes, stationary and portable, for every power requirement. Capacities 50 to 5000 cubic feet of air per minute. Expert engineering counsel without obligation. Ask for Bulletins.

Chicago Pneumatic Tool Company

Chicago Pneumatic Building · 6 East 44th Street · New York

CP Products are stocked at Tulsa, Okla., 23 East Brady Street

Sales and*Service Branches all over the World

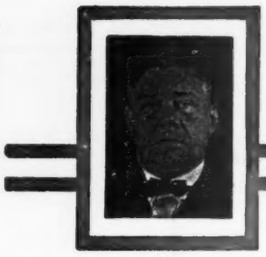
*Birmingham *Boston *Chicago *Cincinnati Cleveland Denver *Detroit El Paso Houston *Los Angeles *Minneapolis New Orleans *New York *Philadelphia *Pittsburgh Richmond Salt Lake City *San Francisco Seattle *St. Louis Tulsa Basle Berlin Bombay Brussels *Buenos Aires Christiania Dairen Havana Helsingfors Honolulu Johannesburg London Manila Milan *Montevideo Montreal Osaka Paris *Rio de Janeiro Rotterdam Santiago *Sao Paulo Seoul Shanghai Tampico Tokyo *Toronto *Vancouver *Winnipeg

C-121

BOYER PNEUMATIC HAMMERS··LITTLE GIANT PNEUMATIC AND ELECTRIC TOOLS
CHICAGO PNEUMATIC AIR COMPRESSORS··VACUUM PUMPS··PNEUMATIC HOISTS,
GIANT OIL AND GAS ENGINES ROCK DRILLS ·· COAL DRILLS

CHICAGO PNEUMATIC

Depend upon *that Name*



Gulf Coast Oil Operations

By P. L. McGreal

United North & South Co.'s No. 11-A Allen and No. 7-A Allen flowing 1,500 bbls. each at 1,890 feet in formerly supposed gas sand. To drill 25 offsets under lease obligations. Still drilling on deeper tests. Gulf Production's No. 11 Morris Phillips, Hull, and No. 4 Hager Fee, Orange, flowing 1,200 each.

HOUSTON, Tex., July 7.—Both the Coastal pools and the Southwest fields made better showings in the matter of completed wells this week than in several weeks past. In the Luling Field, the United North & South Oil Co.'s No. 11-A Allen came in at 1,890 feet, flowing 1,500 bbls. and No. 7-A Allen is flowing the same amount at about the same depth. The feature of these wells is that the pay is compared with 2,100 feet in the other well. The Grayburg Oil Co.'s No. 6 Allen is making 600 bbls. of oil. The shallower pay has been observed in all the other wells on both the Caldwell and Guadalupe County, sides of the river, but was drilled through as a gas sand. It showed in the old Caldwell Oil Co.'s No. 1 Hardeman at 1,900 feet, which was the third well in the original district. The gas ignited and burned the derrick and the well was finally completed in the lime at 2,100 feet.

The United North & South Oil Co. is starting 25 wells, a majority of them on the Guadalupe County side. They are offset locations, the land owners having pressed the company to comply with lease obligations. The average cost of a well there is $15,000. Various rumors are afloat concerning the sale of the properties of the United North & South Co., which have been advertised for sale. These rumors connect the Magnolia, Roxana, Humble, Sinclair Oil & Gas Co. and others as negotiating for the properties, but officials decine to verify them. An engineer for the Standard Oil Co. of Indiana (Dixie Oil Co.) and a party representing that company and the Sinclair interests have visited the field and looked over the properties. The Sinclair Crude Oil Purchasing Co. has a representative stationed in the field now, who is watching the daily production. The 8-inch line of the Magnolia Petroleum Co. is nearing the main trunk line station at Hull and it is predicted it will be running oil by August 1. The Magnolia Co. has now about 2,250,000 bbls. in steel strong at Luling and will probably have 250,000 bbls. more by the time the line is opened.

The three deep tests started by the United North & South Co. in the old part of the field, are still drilling. No. 1 Hardeman being around 4,900 feet.

Laredo Pools

In the Laredo pools, the Rydal Oil Co.'s No. 1 is rated at 150 bbls. and the Binney Oil Co.'s No. 2 is a 15,000,000 gasser. In the Los Ojulas Pool, the Richmond-Garcia Co.'s No. 5 is pumping 50 bbls. at 1,680 feet and Allsworth Brothers' No. 2 is making 125 bbls. at 1,715 feet. The Cornhuskers Oil Co.'s No. 4 is making 75 bbls. at 1,711 feet.

The tank car shipments from the various pools during June were the highest on record, a total of 887 being loaded, an increase of 149 cars over the May shipments.

In the Wolcott Pool, Chandler & Geer's No. 7 is around 1,780 feet and the Weslaco Oil Co. has started drilling No. 5. The Texical Oil Co.'s No. 2 is around 1,740 feet. The Hobo Oil Co.'s No. 1 is at 1,090 feet. The Shasta Oil Co. has started No. 7. In the Aviator Pool, the Andrews Petroleum Co.'s No. 3 is around 1,560 feet. Bryant and others' No. 1 Albercoas is around 1,500- feet. The Alonzo Oil Co.'s No. 2 is rigging. The Morgan-Gible Co.'s No. 2 is showing gas at 1,305 feet.

In Jim Hogg County, Henne, Winch & Faris' No. 1 Martinoux, 35 miles southeast of the Caroline-Texas gas district, which blew in last week while bailing, is now under control. It is estimated as a 50,000,000 foot gasser with the sand from 1,944 to 1,960 feet. Casing was set at 1,943 feet. It shows a pressure of 600 pounds.

In the Gulf Coast region, the Sun Oil Co.'s No. 6 Cade at High Island, Galveston County, is heading up and making about 400 bbls. per day through the 8¼-inch casing at 3,330 feet. Four-inch liner is being set. High Island is a partially defined saline dome in the eastern part of Galveston Peninsula, just south of Jefferson County. The Sun Oil Co. is drilling Nos 3-C and 7 Cade and the Gulf Production Co.'s No. 1 Smith there.

Estimated Daily Gross Production

The estimated daily average gross production in the Gulf Coast heavy gravity pools and the lighter gravity fields of the southwest is placed at 138,635 bbls. for the week. The estimate for each district is as follows:

District—	Gross Bbls.
Batson	1,550
Blue Ridge	1,220
Barber Hill	180
Dayton	85
Damon Mound	1,520
Edgerly (Louisiana)	585
Goose Creek	10,945
Humble	6,750
Hull	21,400
Jennings (Louisiana)	600
Markham	410
Orange	10,075
Pierce Junction	435
Spindletop	995
Saratoga	1,495
Sour Lake	4,450
Vinton (Louisiana)	5,510
Welsh-Anse La Bute (Louisiana)	80
West Columbia	11,410
*Miscellaneous	875
Total Gulf Coast	80,580
Southwest Fields	
Luling	50,000
Laredo	4,275
Somerset	2,480
Calliham	790
Rockdale-Minerva	510
Total southwest	58,055

*Big Creek, 500 bbls.; Nacogdoches, 110 bbls.; High Island, 20 bbls.; Big Hill, Jefferson County, 20 bbls.; Hockley, Harris County, 25 bbls.; balance New Iberia and others spots in South Louisiana.

Gulf Coast Completions

Wells completed in the Gulf Coast pools in the early part of the week include the Gulf Production Co.'s No. 11 Morris-Phillips in the Hull Pool, flowing 1,200 bbls. at 3,250 feet after being worked over. The Republic Production Co.-Houston Oil Co.'s No. 85 Dolbear, which came in last week flowing 2,500 bbls. at 1,300 feet, declined to 500 bbls during the present week. The Sun Oil Co. got salt water in No. 5 Robertson at 3,210 feet in the West Columbia Pool after working it over.

In the Goose Creek Pool, the Gulf Production Co.'s No. 7 Chapman-Bryan, near the mouth of the creek, is making 200 bbls. on the air compressor at 4,490 feet. Its No. 16 J. Galliard, a work over, is making 400 bbls. at 4,300 feet and No. 18-A Smith is pumping 50 bbls. at 2,570 feet. The Humble Oil & Refining Co. is setting a liner in No. 33 Schilling at 4,480 feet. It showed salt water and some oil, heading at times.

In the Orange Pool, the Gulf Production Co.'s No. 4 Hager fee, on the east side of Cow Bayou, is flowing 1,200 bbls. after being deepened to 3,500 feet. The Rycade Petroleum Co.'s No. 2-E State land in the bayou, showed salt water at 4,630 feet and is being drilled deeper. The Humble Oil & Refining Co.'s No. 4 Winifree is pumping 15 bbls. at 3,350 feet, a worked over hole.

In the Sour Lake Pool, The Texas Co. revived No. 232 fee and it is making 40 bbls. on the jack at 2,125 feet. The Gilbert Oil Co.'s No. 94 fee was abandoned in salt water at 1,750 feet.

The stimulus of $2 is reflected in an increase in the number of wells drilling, especially in the older pools, where the shallow sands and cap rock formation are more uniform than are the deeper sands in such places as Goose Creek, Orange and Hull. In the Humble Pool, the Southern Petroleum Co.'s No. 40 Landslide is working over. If the market holds up that company plans to drill six or more new wells on its Landslide tract. The Galena-Signal Oil Co. of Texas is starting Nos. 41 and 42 Stevenson in the deep sand section. John Deering is drilling No. 2 Bissonnett in the northwest side of the pool. The Gulf Coast is rigging No. 37 Herman and R. C. Hardin and associates have a derrick up for No. 2 Lee. Norton & Co. are drilling No. 1 Butler and H. A. Cline No. 1 Bailey. Spindletop and Batson are two more of the old pools where an increase in operations is noted.

Humble Pool

In the Humble Pool, the Southern Petroleum Co. is preparing to bail No. 40 Landslide after working it over. E. A Gunter is drilling No. 3 Echolds. S. A. Weed No. 1 Conway, W. E. Defee, No. 2 Mason. J. M. Hester, No. 1 Hermann and J. W. Fincher No. 1 Strange.

The Rycade Petroleum Co.'s No. 1 Gary in the Markham Pool, which came in last month flowing 2,000 bbls., is now making 150 bbls. per day. The company is starting No. 1 McManus and No. 1 Meyers. The Gulf Co. is drilling No. 5 West-Schenck on the south side of the Blue Ridge Dome and No. 3 Invincible on the southwest side. The Atlantic Oil Producing Co.'s No. 1 Camp on the south side of the dome at Pierce Junction is drilling below 3,250 feet and the Gulf Production Co.'s No. 16 Taylor is around 3,000 feet.

At Spindletop, the Gulf Production Co.'s No. 151 Gladys. Stella Oil Co.'s No. 17 Hogg-Swayne. Edna Oil Co.'s No. 1 J. E. Schliner's No. 1 and Unity Oil Co.'s No. 84 McFaddin, are all drilling. In the Saratoga Pool, the Weldon Oil Co.'s No. 5 Brice Paggi Oil Co.'s No. 1 Queen City and the Rio Bravo Oil Co.'s No. 10-B and 12-B are drilling and the Humble Oil & Refining Co.'s No. 38 Hardin at Sour Lake is drilling.

Calliham District

The search for deep sands in the Calliham district in McMullen and Live Oak Counties has not been successful to date. The test on the Aycock, southwest of production between 700 and 800 feet, has been abandoned after drilling to 1,600 feet. Pickett and others' No. 3 Jacobs, 4 mile north, is shut down at 1,100 feet. Everett's No. 1 Stitz, west of production, is drilling below 2,050 feet. Fennell and others' No. 1 Byrne is shut down at 1,520 feet. The Southern Natural Gas Co. is drilling No. 9 Mark.

In the Somerset district in Bexar County, the Economy Oil Co. is starting Nos. 1 and 2 Kaufman with derricks standing or locations made for Nos. 3, 4, and 5. The Helvetia Oil Co.'s Nos. 20 and 21 Smith have started drilling. Hitchman & Howard's No. 9 Schmidt is rigging. The Gas Ridge Oil Co.'s No. 9 Hamilton is drilling.

Milam County

In the Rockdale-Minerva shallow sand districts, the Lee-Phillips Oil Co.'s No. 1 fee is flowing 175 bbls. by heads. It is in the Rockdale area. Von Gotem is bailing No. 1 Delgarte at 818 feet and it looks like a 4- or 5 bbl. well. It is 3 miles west of Rockdale. The Noark Oil Co. got nothing in No. 3 Roark at 1,000 feet. The Roundtree Oil Co.'s No. 5 fee is bailing. The National Oil Co. went into chalk in No. 1 near Sharp at 1,200 feet and is rigging No. 2.

The Erie Investment Co.'s No. 7 McClelland is drilling, as is the Fogel Oil Co.'s No. 10 McClelland and the National Oil Co.'s No. 2 Dilworth.

San Marcos River Dispute

The Grayburg Oil Co. deepened No. 10 Allen, on the Guadalupe County side about 6 feet more into the lime and its flow increased from 200 to 4,000 bbls. The same company's Nos. 14 and 15 McKean are each good for 2,000 bbls. The J. K. Hughes Development Co.'s No. 7 Allen is flowing 800 bbls. H. C. Thorman is reaming to set casing in No. 3 Harris, northwest of production, at 2,000 feet. It showed considerable gas and is an important test due to its location.

A contention has arose between Young & McManus and the United North & South Oil Co. over the right to drill on the banks of the San Marcos River, which is the boundary between Caldwell and Guadalupe Counties, with production on both sides of the stream. The State land office granted permits to Young & McManus, who were preparing to drill three wells. The United North & South Co. claims their leases extend to the water line and have filed objections to the permits.

Coastal Completions

Completed wells in the Coastal Pools during the week number 20, of which 7 were worked over wells. The initial production totals 6,505 bbls. with two dry holes and two saltwater wells. Eight tests are bailing at the close of the week.

In the Goose Creek Pool, the Humble Oil & Refining Co.'s No. 3 Harrell bailed dry at 4,555 feet an dthe Gulf Co.'s No. 2 H. Galliard is bailing at 2,600 feet. The Sheffield Oil Co.'s No. 1 Trembly in the Spindletop Pool is bailing at 870 feet.

The Hull Pool registered some nice wells late in the week. The Republic Production-Houston Oil Co.'s No. 53 Dolbear, a workover, is bailing at 3,120 feet. No. 81, a new well, is making 100 bbls. at 2,640 feet, and No. 84 is doing 850 bbls. at 2,950 feet. W. B. Flynn's No. 4 Ray is bailing at 2,300 feet. The Yount-Lee Oil Co.'s No. 2 Stengler on the north side, will pump at 3,260 feet.

In the Orange Pool, the Brownie Babbittee Oil Co.'s No. 4 Brown, in the southeast part of the pool, is flowing 800 bbls. at 4,550 feet. The American National Oil Co.'s No. 1 Winifree is setting strainer at 4,660 feet. It is three-quarters of a mile northeast of production. The Rycade Petroleum Co.'s No. 4 Kishi is swabbing at 3,050 feet. The Orange Petroleum Co.'s No. 7 Chesson, deepened to 3,500 feet, is flowing 400 bbls. by heads. The Mutual Oil Co.'s No. 3 Chesson, a workover, will make a pumper at 3,925 feet and the Sinclair Oil & Gas Co.'s No. 2 Granger will do the same at 3,325 feet.

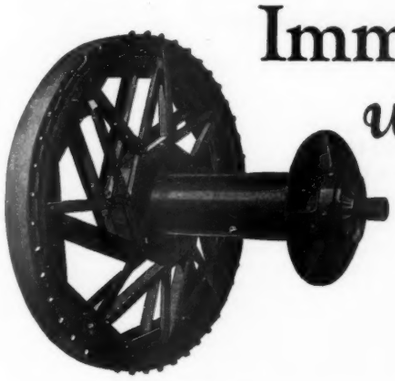
The Laredo Oil Co.'s No. 8 is bailing in the Schott Pool, in Webb County.

Coastal and Southwest Wildcats

In Brazoria County, the Associated Oil Co.'s No. 1 Perry is still idle at 4,351 feet. It is on the south side of Stratton Dome. The Sinclair Oil & Gas Co.'s No. 1 Perry is drilling at 415 feet and the Humble Oil & Refining Co.'s No. 1-A Schmidt is a rig. The Gulf-Atlantic's

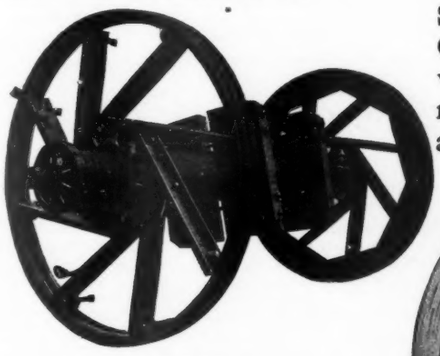
(Continued on Page 112)

Immediate Economies *with* Steel Equipment



Steel Calf Wheel

Heavy bracing angles extend from each arm to each tug rim bolt. Tug rim is held firm and braced solid. It *can't* be pulled loose or out of line. Patented construction of the Pareelite* Shaft Hub insures a true-running, well-balanced wheel. Quick to assemble, long lasting.



Steel Bull Wheel

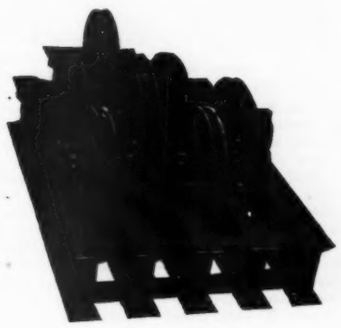
Positive traction given by "V"-Grooved Pareelite* Tug Rim. Brake Cants securely clamped and bolted between two rings of steel Cants—easily replaced when worn. Arms attached to Tug and Brake Wheels for quick assembly in the field.

Parkersburg Steel Drilling Equipment offers an opportunity to save initially—and in the long run. Immediately through reduction in operating costs. Eventually through durability over wood parts.

Parkersburg Steel Drilling Equipment includes complete Steel Drilling Rigs, Steel Derricks, Steel Bull Wheels, Steel Calf Wheels, Steel Band Wheels, Tug Pulleys and Steel Crown Blocks. All of these units are designed with a view to strength and durability and are made under conditions which insure accuracy and easy assembling in the field.

Steel Band Wheel

Made in standard diameters, faced for standard width belting. Steel Angle Arms, securely riveted to circles of Steel Cants and bolted to a Pareelite* Shaft Hub, eliminate the need of band wheel flanges. Furnished with metal Tug Pulley



Steel Crown Block

There is no worry about lubrication with Parkersburg Steel Crown Blocks. Cup grease rests directly on top half of trunnion and lubrication is continuous. There is *solid metal* between pulley trunnion and top flange of I-Beam. Pulley loads carried directly on the I-Beams.

*Pareelite is a "High Manganese" metal—not cast iron—that will sustain a load of 4320 lbs. on arbitration test bar of the American Society for Testing Materials, and with only 7/64th inch deflection at breaking point. It has an ultimate tensile strength of 33,680 lbs. per square inch.
In elasticity, Pareelite approaches more nearly to cast steel than any other iron base metal.

When YOU buy Parkersburg Steel Equipment you not only insure savings in the long run but you profit by certain economies that can be effected immediately

The PARKERSBURG RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va. ***New York Office,*** 30 Church St.

California Representatives, BUCK & STODDARD
485 California St., San Francisco, Calif.; Box 720, Arcade Station, Los Angeles, Calif.

District Offices and Distributing Warehouses from which Parkersburg Service is available

TEXAS
*Houston
Breckenridge
Corsicana
Iowa Park
Luling
Mexia
Orange
Ranger
Westbrook

WYOMING
*Casper
‡Rawlins

LOUISIANA
*Shreveport
Haynesville

KANSAS
*Eldorado
Madison

WEST VIRGINIA
Parkersburg
Clarksburg

OKLAHOMA
*Tulsa
Bristow
Drumright
Holdenville
Hominy
Okmulgee
Wetumka
Tonkawa
Wilson
Shidler
Stroud
Wewoka

ARKANSAS
*El Dorado
Louann
Smackover
McNeil

MONTANA
Sunburst
†Winnett

*District Offices ‡Frick-Reid Supply Co. †Continental Supply Co.

Wyoming Field Operations

By F. B. Taylor

Queen City Oil Co.'s well makes 40 bbls. an hour, second big producer in Sunburst Field, Montana, within two months. Beaver Montana Co. gets 100-bbl. well. Midwest to drill two more in Lake Basin. Salt Creek busy on new wells. Two Ohio Co. producers in Lance Creek making 3,000 bbls.

CASPER, Wyo., July 7.—Sunburst Field in Montana is in the spotlight with two new wells, one doing 1,000 bbls. and the other good for 100 bbls.

The Queen City Oil Co., drilling on Section 4-34-2 in the south end of the Sunburst Field found the Ellis sand at 1,498 feet and drilled into the sand about 6 feet. The well started to gas and fill up and in a short time was making about 40 bbls. per hour. Trying to shut it in, the crew capped the 6⅝-inch casing and then the oil started coming up outside the small casing and flowing from the 10-inch pipe. The Illinois Pipe Line Co. has laid a line to the well and the flow is now being taken in the regular way.

This well is the second big producer brought in within the past two months in the south end of the Sunburst Field and the leases that formerly were going begging in that part are now at a premnum while Shelby operators look confidently to an extension southward that will reach within a short distance of the town east of the California Co.'s camp on Sec- in past years that appeared to have proven this dry territory are discounted and the Van Meer gusher that came in a 2,000-bbl. producer is being pointed to as an example of a strike where dry holes had previously condemned the area.

On Section 25-35-2, the Beaver Montana Oil Co. on the George Stannard lease found the Ellis sand at 1,460 feet and drilled into the pay about 15 feet which resulted in a producer good for 100 bbls. This location is on the east side of the field and about 2 miles southeast of the California Co.'s camp on Section 26.

The Mutual Oil Co. brought in a good well in the central part of the field near the company's main camp on Section 22-35-2 that will make about 50 bbls. from the Ellis sand. The sand was found at 1,445 feet and a shot increased the natural production. This well is inside the field and does not extend the known area to any extent.

While the above wells are producers, the Sunburst Field also brought in three dry holes. The Mutual Oil Co. drilled a duster on Section 20-35-2, where several other dry holes have been drilled before and this practically condemns the northwest quarter although the Canadian American Oil Co. has two producers on the southwest quarter.

The Homestake Exploration Co. drilled in a dry hole on Helgard lease on Section 3-34-2 and the Ohio Oil Co. drilled in a dry hole on Section 4-34-2.

Lake Basin Field

The Lake Basin Field northwest of Billings 35 miles in Stillwater County is quiet. The discovery well on the Hepp lease is shut in, but tubing has been placed and tankage is about ready for testing. The Midwest has a second well drilling about 250 feet and a third rig nearly ready for tools. This third well will be drilled with a rotary outfit.

Montana oil men are considering that the Sunburst Field is going to spread out from its present area to the south and southwest. The two large wells recently brought in on the south show that end of the development has good possibilities and because of the geology being covered up over much of the area, there is little chance to tell definitely how far the extension will go. The central part of the field has been shown to be spotted and basing their conclusions on this fact, many of the smaller operators state that the dry holes at first thought to have defined the field limits, could easily have been drilled in dry spots in the sand with production all around them.

Leases that were thrown up a year ago because of dry holes seeming to shut off production in that direction are now being sought after again and it looks like another season of wildcatting around the outskirts is starting. Sunburst is one of the most economical fields in the Rocky Mountain region, the average depth is around 1,500 feet and the larger drilling machines can easily put down the wells. While there is some cave and water to contend with, the drilling on the whole is good and two strings of casing usually suffice for a well. The Ellis sand is the main producer of the field but the crude from this formation contains some sulphur while the Kootenai sand above the Ellis carries an oil with very little sulphur content.

Salt Creek Busy

In the Wyoming fields, the work is rather quiet except at Salt Creek. At that point the oil companies are busy drilling new wells and in spite of the completions being brought in, the Salt Creek Field continues to decline slowly in production. Many of the wells that formerly flowed are now pumping and soon the whole field will be on the beam.

The Midwest Refining Co. has completed the foundations for the largest electric power plant ever placed in any oil field, and the framework is now under way. The great electric generating plant is to be the largest steam plant in this region and is only surpassed by some water power electric plants in output. The gas from the wells will be used to fire the boilers, a large dam has been built that will furnish water and the electricity generated will be carried over the field on high tension lines to stepdown stations where it will be sent to the transformers and the wells.

This great plant was conceived by A. W. Peake, chief engineer of the Midwest, and is being built under his direct supervision. Mr. Peake hails from Kansas, but came to the Midwest and the Wyoming oil fields from California, where he graduated from Stanford University. With him came W. R. Finney, also a graduate of Stanford and these two men have made an enviable record in the Rocky Mountain region, putting in the first gasoline extraction plant in Salt Creek and later enlarging it to what is now the largest gasoline plant in the world. They also laid the first welded pipe line from Salt Creek to Casper which proved successful in the face of much opposition. This pipe line was later enlarged by the laying of a second welded line and both are now in service conveying the gasoline from the big plant to Casper for blending and marketing.

The Lance Creek Field in Niobrara County, Wyoming is attracting attention. The Ohio Oil Co. now has two large producers there making about 3,000 bbls. daily and the other companies are showing interest in the field. Lance Creek was opened in 1919 by the Ohio drilling in a gusher but the subsequent drilling showed the field to be so spotted that the operators gave up in disgust. A few firms, including the Ohio and Western States, kept on and it now appears their efforts will be rewarded with the finding of another pool that has good staying qualities. The Western States drilled in a gas and oil producer about a month ago that is making around 500 bbls. through a gas trap.

Pilot Butte Field

The Marine Oil Co. has made locations in the Pilot Butte Field for three wells to be drilled at once. The Pilot Butte Field is on the Wind River, in Fremont County, about 30 miles north of Riverton. It is a shallow operation the depth averaging 900 feet and has about 27 pumpers at present. The oil feeds from some lower sand through faults and efforts have been made in the past to drill wells to the sand that is supplying the oil. So far these efforts have been fruitless.

The LaBarge and Big Piney Field in Lincoln County, in the southwest corner of Wyoming is active. The Midwest is starting a deep test and three other wells are starting to the shallow sand production. This shallow sand is also fed from a deep sand pool in the opinion of many geologists and the Midwest well is to be drilled through all horizons in an effort to find it.

The Midwest has about completed its drilling on the Jordan Dome north of Cheyenne to find out the geology of the structure. At this dome the Midwest drilled several wells to shallow depths just to obtain the stratification of the Cretaceous under the Tertiary formation. Four holes have been put down to about 500 feet for this purpose.

In the Matthew Foreman well near Guernsey, the tools are on the beam and the 15-inch casing has been placed, this is to be a deep test for that area and is the first well to be drilled in the Guernsey territory. The location is in Platte County.

State royalties from oil sales from State owned lands in Wyoming, will be paid July 1 instead of September 1 as formerly. This year this will amount to $3,427,358.56. This sum goes mainly towards the upkeep of schools and the Wyoming University though the counties from where the oil came also share in the proceeds.

Fields of the Central West

By Whit

FINDLAY, Ohio, July 7.—If no drop is reported in the Trenton rock or Lima Field of Ohio and Indiana, or in Illinois, the chances are the usual amount of new work will continue throughout the summer and fall. This is the talk of the operators in general.

There is no spot in the Lima Field that can be expected to develop large wells, and any time an operator hits a flush 100-bbl. producer, he feels as though he has found a gusher, while in the younger days of the field, many wells that showed from 200 to 500 bbls. were looked upon as worthless, but that was during the reign of 15-cent crude, and when the field was showing wells from 5,000 bbls. up with regularity. It was in those early days that some test work was done in the western half of Paulding County, and in some parts of Van Wert County. These wells in these two counties made nice showings, but not being flowing wells, were given up, lost and forgotten until recently, when the U. S. A. Oil Co. started work a short distance west of the town of Payne, in Paulding County, finding wells starting from 25 to 200 bbls. and better. These new finds are of recent date, most having been completed the first six months of 1924, and while the field has not shown any rush of new work, it is destined to be one of the leading areas for some time. This being far north of the old field adds much new territory to the old field. The fact must not be overlooked that south of the old field, about the same distance as the Paulding development is on the north, there is the new area opened up during the winter by the Elierman Brothers, on the Elierman farm, in Cynthian Township, Shelby County, since then a number of other producers have been found in that county.

New Well in Paulding

The latest well in the Paulding County Field is the Harman-Miller Oil Co.'s No. 1 on the Graham, Section 4, Benton Township, which was reported at 200 bbls. flush and will make a 40-bbl. producer, which is far above the average run of wells over the Trenton rock area. No. 2, same farm, is being started.

In Lake Township, Wood County, R. G. Bowie's test on the southwest corner of the Henry Gahnsenm, Section 36, pumped 9 bbls. at 1,316 feet. In Perrysburg Township, the Ohio Oil Co.'s test on the southeast corner of the George Vetter, Section 27, was a dry hole. Top of Trenton was found at 1,240 feet and drilled 140 feet in to a total depth of 1,380 feet.

In Woodville Township, Sandusky County, the Interstate Operating Co.'s No. 8 Edward Overmyer, Section 27, pumped 20 bbls. from a depth of 1,282 feet.

In Harrisonville Township, Ottawa County, in the Elmore Field, the Zorn-Hornung Oil Co.'s No. 8 on the northwest corner of the Mary Scott, Section 20, pumped 15 bbls. at a depth of 1,324 feet.

In Mississinewa Township, Darke County, the Illendo Oil Co.'s No. 5 on the northeast corner of the John Schmidtz, Section 2, pumped but 1 bbl.

In Richland Township, Allen County, John B. Sawmille & Son abandoned Nos. 2, 3 and 4 Bessire farm, and Nos. 5, 6, and 7 Locher farm, all in Section 25.

New Drilling Wells

In Moulton Township, Auglaize County, J. R. Kelley is drilling a test on the J. R. Julian, Section 24, and Cliff Blair and others are drilling a test on the Dave Hanold, Section 34. In Logan Township, E. L. Kirk and others are drilling a test on the F. Ziegenbush, Section 10.

Only two wells are drilling in Allen County. In Bath Township, C. A. Peavey and others are drilling No. 9 E. Lewis, Section 1, and in Marion Township, Hadley & Kelley are drilling a second test on the D. N. Gengler, Section 10.

Between Findlay and Lima, in Eagle Township, Hancock County, B. Porter and others are drilling No. 17 E. H. Haley, Section 7, and have rig up for No. 2 S. M. McClelland, Section 7. Porter & Hovis have rigs in for Nos. 13 and 14 Lem Aurand, Section 5. In Union Township, Ewing & Montgomery are at work on No. 9 Henry Deeds, Section 12.

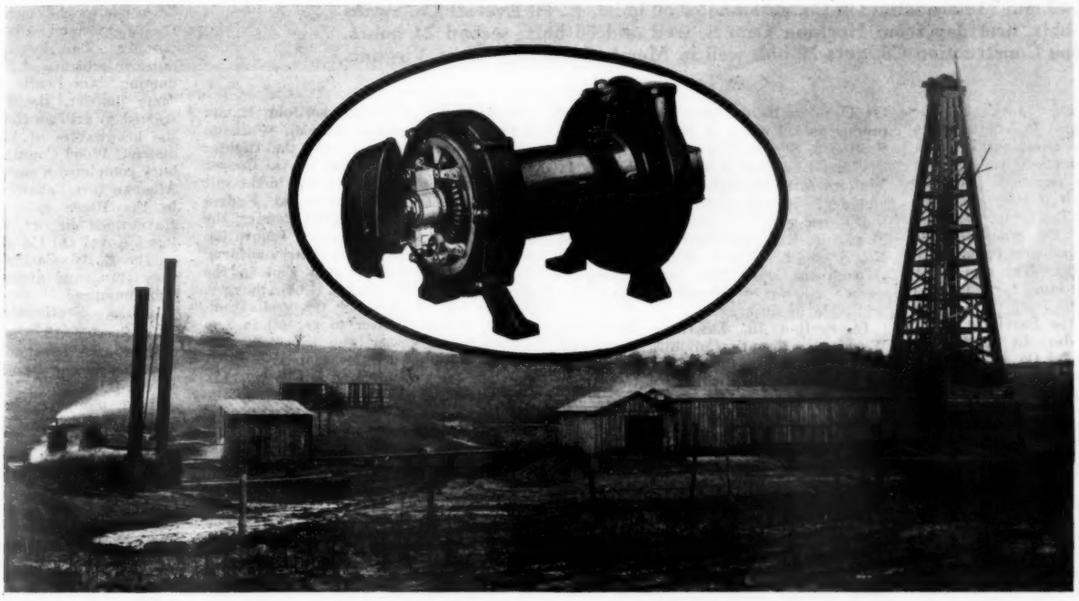
At the north edge of Cygnet, in Section 6, Bloom Township, Wood County, the Western Ohio Oil Co. is drilling No. 3 on the Walbridge-Loose farm, between No. 1 and the interurban line. In Section 2, Liberty Township, near Portage, the Paragon Refining Co. is drilling a

(Continued on Page 86)

STORM, RUST & GAS PROOF

CAST ALUMINUM ALLOY BUILT TO LAST

Pyle-O-Lytes and STEAM TURBO-GENERATORS



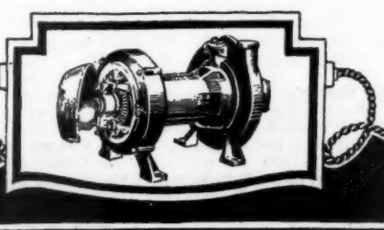
The Deepest Test Ever Drilled In Oklahoma Used the Pyle-National Steam Turbo-Generator

CURRENT for lighting this Kingwood Oil Company test, at Okmulgee, Okla., drilled to a depth of 5,282 feet, was generated by a Pyle-National Generator. It is the most widely used Generator in the Oklahoma fields—not because of its unfailing dependability alone, but because of its economy of operation and its simple, sturdy construction. This, with Pyle-O-Lyte Floodlighting Units, makes the most complete and most practical lighting outfit you can install. We have in your community an expert service man who is always at your command.

Supply houses everywhere carry this equipment in stock; get in touch with the one nearest you or write for special booklet on oil well lighting.

The PYLE-NATIONAL COMPANY

General Offices and Works:
1334-58 N. Kostner Ave.
CHICAGO



In Canada:
The Holden Co., Ltd.
Montreal, Winnipeg, Vancouver, Toronto

Pennsylvania-West Virginia

By D. S. Wakenight

Pure Oil Co. has three good completions in York Township, Morgan County, 50, 40 and 30 bbls. Sun Oil Co. gets one of 50 bbls. E. H. Everett Co. swabs 80 bbls. first day from Hocking County well and 50 bbls. second 24 hours. Hope Construction Co. gets 20-bbl. well in Marshall County, West Virginia.

PITTSBURGH, Pa., July 7.—The shallow sand territory in southeastern Ohio has come to the front with a number of producers far above the average size in that kind of territory. All are in the new Berea grit development. In Section 29, York Township, Morgan County, the Pure Oil Co. completed No. 4 on the Ira N. Barringer farm. it is good for 30 bbls. a day. The same company's No. 5 on the same farm is good for 40 bbls. a day. The Pure Oil Co. has completed No. 6 on the Barringer farm, good for 50 bbls. a day. In Section 28, York Township, Sun Oil Co. completed a test on the Davis Oil Co.'s lease and it is good for 50 bbls. a day. This location is 500 feet northeast of the same company's test on the Charles Switzer farm. The Swingle Oil & Gas Co.'s test on the William Spring farm, located in Section 12, Clay Township, Muskingum County, is a duster in the Berea grit.

Pumper and Duster in Holmes County

In Lot 22, Hardy Township, Holmes County, the East Ohio Gas Co. completed a second test on the W. H. Uhl farm, 1,500 feet east of the first test, and good for 15 or 20 bbls. a day in the Clinton sand. Three miles west of Millersburg, is Lot 2, Monroe Township, the same company has drilled a test on the C. H. Smith farm through the Clinton sand and dry. In Section 13, Bowling Green Township, Licking County, the Midland Oil Co. completed and shot in the Clinton sand a second test on the L. G. Cooperrider farm. The well made one small flow showing for a fair producer. In Lot 21, Franklin Township, W. W. & A. T. Wehrle have a 3-bbl. pumper in the Berea grit at No. 5 on the J. L. Watson farm. In Lot 2, Licking Township, the same parties completed No. 3 on the Charles Ice farm, showing a little oil and gas in the Berea grit.

In Section 23, Washington Township, Monroe County, the West Virginia & Ohio Oil & Gas Co. has a dry hole in the Big Injun sand at a second test on the J. E. Howell farm. In Section 7, Liberty Township, Washington County, the Carter Oil Co. started to drill a second test on the Simon Archer farm. In Perry Township, Licking County, the same company started to drill a test on the Frank Phillips farm, 1,800 feet east of the Pure Oil Co.'s test on the Seward farm. In Section 21, Knox Township, Columbiana County, John E. Davidson started to drill a second test on his own farm.

Two Fair Deep Sanders

The deep sand territory in southeastern Ohio has broken away from its run of light wells and completed two fair producers. The better of the two is the Edward H. Everett Co.'s second test on the F. M. & Kate Haynes farm. They swabbed 80 bbls. the first and 50 the second 24 hours. This location is in Lot 13, Hanover Township, Licking County. In Section 16, Prairie Township, Holmes County, the Pure Oil Co. drilled its second test on the W. H. Müller farm through the Clinton sand and showing for a 30-bbl. producer. This location is one-half mile southeast of the same company's test on the I. F. Snyder farm.

In Section 19, Enoch Township, Noble County, the Lusbbe Oil Co. has completed in the Buell Run sand Nos. 7 and 8 on the Theodore Boyd farm. Their combined production is about 4 bbls. a day. In Section 8, Sharon Township, Earl Stephens & Co. drilled a test on the E. L. Walters farm through the 700-foot sand and dry. It will probably be drilled to the Berea grit. In Section 29, Enoch Township, E. L. Hutcheson & Co. drilled No. 8 on the Joseph Miller, Jr., farm through the Buell Run sand. Scarcely enough oil was developed to make it a profitable producer.

In Section 10, Lawrence Township, Washington County, Calvin A. Peevy and others drilled No. 68 on the Torner Oil Co.'s lease through the first Cow Run sand and dry. In the old Corning district, Section 14, Monroe Township, Perry County, Marshall & Marshall completed No. 25 on the Donahue farm, not good for more than 2 bbls. a day in the Berea grit. In Section 13, the Monroe Oil & Gas Co. started to drill on the Elwood Newberry farm. In Section 26, Rush Creek Township, Fairfield County, the Blum Oil & Gas Co. started to drill a second test on the John McCandlish farm. In the vicinity of Newark, Licking County, W. W. & A. T. Wehrle are very active. They are drilling tests on the I. & A. Fetty, Stanley Darnes and Charles Harrison, one-fourth mile west of John Gleckner farm. The same parties are drilling a test on the Joshua Hartman farm and expect to drill to the Trenton Rock. The Ohio Fuel Supply Co.'s test on the fairgrounds will also be drilled to the same formation. This location is 1,200 feet northeast of the Trenton producer on the W. W. & A. T. Wehrle farm. Located 1,000 feet north of production on the Blazer heirs' farm in Section 2, Lawrence Township, Washington County, J. T. Campbell started to drill a test on the E. Blazer farm.

West Virginia Completions

West Virginia has completed no large producers and only two better than the average. In Liberty district, Marshall County, the Hope Construction & Refining Co. completed in the Gordon sand a second test on the I. G. Logsdon farm and good for 20 bbls. a day. In Jefferson Township, Lincoln County, the Columbia Gas & Electric has a gasser in the Big Injun sand on the Miller farm. In Barboursville district, Cabell County, the Aetna Oil & Gas Co.'s test on the H. C. Markey farm is a large gasser in the Berea grit. The United Fuel Gas Co.'s test on the Emma J. Young farm, in Smithfield district, Roane County, is a gasser in the Big Injun sand. In Walton district, the same company has a gasser in the same formation at a test on the D. D. Kelly farm. In Lee district, Calhoun County, the Heck Oil Co. abandoned its test on the W. T. Price farm. In Paw-Paw district, Marion County, the Owens Bottle & Machine Co.'s test on the A. M. Hill farm was a light gasser in the salt sand.

Ritchie County

On Indian Creek, Murphy district, Ritchie County, the Parks Oil & Gas Co. completed in the salt sand a test on the McFadden heirs' farm, a light gasser. On Hughes River, in the same district, Ira Haught completed in the same formation a light gasser on the Mary A. D. Deem farm. On the same river, the Hughes River Oil & Gas Co. has the rig completed for a test on the John Rymer farm. In Sheridan district, Calhoun County, on Leading Creek, the Richter Oil Co.'s No. 3 on the Z. O. Cooper farm is good for 10 bbls. a day in the salt sand. At the headwaters of Fudges Creek, Grant district, Cabell County, the Aetna Oil & Gas Co. has an innovation at its test on the Henry Marcum farm. It has been completed and shot in the Berea grit showing for a 4-bbl. pumper. This is one of the very few wells completed in that district to get oil in any quantity. A gasser was expected. On Indian Fork, two miles east of Beckett Station, the Consolidated Oil & Gas Co. completed and shot a second test on the Thomas H. Duty farm, a light gasser in the Berea grit.

Calhoun County

In Sherman district, Calhoun County, the Hope Natural Gas Co. has a light show of oil and gas in the Big Injun sand on the Edith McDonald farm. The Philadelphia Oil Co.'s test on the P. P. Carr farm in Otter district, Braxton County, is a gasser in the Gordon sand. In Center district, Gilmer County, the same company's test on the C. Homer Norris farm is dry in the Big Injun sand. In Grant district, Ritchie County, the Penn Royal Oil Co. drilled a test on the I. M. Jackson farm through the Squaw sand and found nothing. It will probably be good for 4 bbls. a day in the Big Injun sand. In Union district, Wood County, Hinds Peevey's second test on the S. P. Allman farm is a 5-bbl. pumper in the Berea grit. Neeley Co.'s No. 4 on the Amos Smith heirs' farm is dry in the Big Injun sand. In the same district, W. F. McCullough has a 4-bbl. pumper at a test on the E. P. Owens farm. In Union district, Schlagel & Freid have a duster in the Big Injun sand at No. 53 on the J. S. Wells farm. In Mannington district, Marion County, the Philadelphia Oil Co.'s test on the Martha Rowand farm is showing for a producer in the Big Injun sand.

Gassers in Lewis County

In Collins Settlement district, Lewis County, the Hope Natural Gas Co. has a Gordon gasser at a test on the O. J. Whitesell farm. In the same district, the same company's test on the G. L. Snyder farm is a gasser in the Gantz sand. On Shawnee Creek, Lafayette district, Pleasants County, the Ellenor Oil & Gas Co. has drilled its test on the B. D.° Hooper farm through the Maxon sand, a gasser good for 400,000 cubic feet a day.

In Serman district, Calhoun County, the Hope Construction & Refining Co. has drilled a test on the P. A. Bourne farm into the Maxon sand and showing for a 15-bbl. pumper. This location is 1¼ miles southwest of the South Penn Oil Co.'s test on the J. S. Shapps farm. On Porters Creek, Union district, Clay County, the Empire Petroleum Co.'s test on the L. Z. Koontz farm is a gasser in the Big Injun sand good for 500,000 feet a day.

Fair Pumper in Ritchie County

Ritchie County has a completion better than the average pumper in that county. On Gillespie Run, Grant district, the Continental Oil & Gas Co. drilled a test on the W. A. Ridgeway farm through the salt sand showing for a 20 or 25-bbl. pumper. This location is 500 feet east of the Hope Construction & Refining Co.'s good producer on the Neil Bradley farm, completed several weeks ago. In Union district, G. W. Comstock & Co. drilled their test on the Hiram Williams farm through the Big Injun sand and dry. In the same district, J. T. Locke & Co. have a gasser in the salt sand at a test on the J. W. Baker farm. In Murphy district Smith & McCullen have the rig completed for a test on the A. T. Prather farm.

Gasser in Kanawha County

Far in advance of production on Rich Creek, Big Sandy district, Kanawha County, the Elk Refining Co. drilled another test on the Goshorn heirs' tract into the Weir sand, showing for a 5-bbl. pumper. This location is more than 5 miles in advance of any previous oil production. On Leatherwood Creek, in the same district, the Cosmos Carbon Co. started to drill on the Osborne farm. On the headwaters of Laurel Creek, Union district, Wood County, Dollman & Kingsbury completed a second test on the S. P. Alleman farm, showing for 8 bbls. a day in the Berea grit. On Sandy Creek, Ravenwood district, Jackson County, the Penn Royal Oil Co. drilled a second test on the E. W. Carter farm into the first Cow Run sand and showing for a very light pumper.

Southeastern Ohio

In Section 18, Clay Township, Knox County, the Preston Oil Co. completed and shot in the Berea grit a second test on the B. F. Baird 160 acres showing for a light pumper. In Lot 15, Madison Township, Licking County, W. W. & A. T. Wehrle completed a test on the A. D. Fetty farm not good for more than 2 bbls. a day. In Section 4, Jackson Township, Muskingum County, the Pure Oil Co. is building a rig on the Robert Ashcraft farm. In Section 8, Pike Township, Coshocton County, the Carter Oil Co. is hauling rig timbers to a location on the C. E. Moore farm.

Gasser and Duster in Tyler County

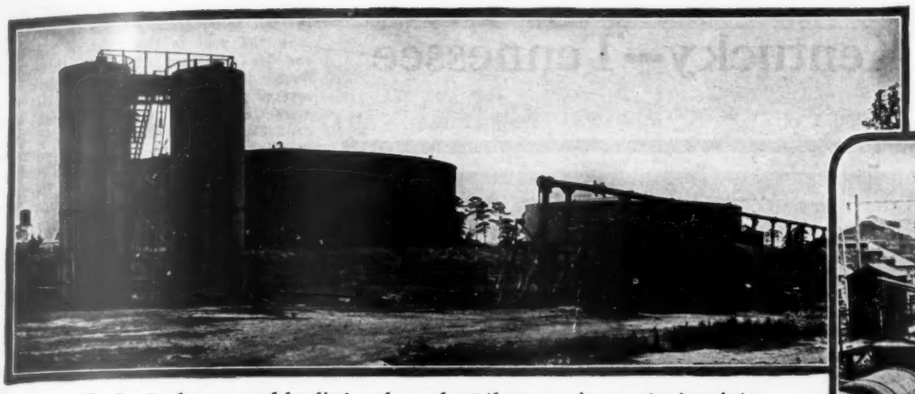
At the headwaters of Sugar Creek, Neade district, Tyler County, Engle & Fonner completed in the Big Injun sand a test on the L. C. Gorrell farm, a fair gasser. This is one mile west of H. L. Lamebert's production on the A. H. McGinnis farm. On Ankrom Fork of Sugar Creek, the Hill Top Oil Co. has a duster in the same formation at a test on the W. T. Conner farm, 3,000 feet east of the Carter Oil Co.'s production on the Carse heirs' farm. In Grant district, Pleasants County, E. A. Ryan's No. 9 on the T. C. Haught farm is good for 5 bbls. a day in the salt sand. On Pedlars Run, Clay district, Monongalia County, the Hope Natural Gas Co.'s second tets on the Ross Barrickman farm is a light gasser in the fifth sand at a total depth of 3,450 feet. On McFarlan Creek, Murphy district, Ritchie County, T. P. & A. P. Mellon completed a test on the J. A. Higginbotham farm, not good for more than 2 bbls. a day in the Big Injun sand. In Union district, Louden & Co. have a duster in the same formation at a test on the Toothman farm. In Grant district, Wetzel County, the Philadelphia Oil Co. completed in the fourth sand No. 15 on the Hoge-Robinson farm, estimated to be good for 15 bbls. a day.

Wildcat a Light Producer

On Gragston Creek, Union district, Wayne County, West Virginia, the Chartiers Oil Co. drilled a test on the Julia Barton farm through the Berea grit and showing for a 2-bbl. pumper. This is in a section little tested and may encourage the starting of some new work. On the waters of Birch Creek, 5 miles northeast of Quaker potsoffice, the Columbia Gas & Electric Co. drilled No. 397 on the Guyandotte Land Association property through the Big Injun sand. It is a gasser, good for 150,000 feet a day. On Charley's Creek, 2 miles southeast of Beckett station, Grant district, Cabell County, the Harshbarger Oil & Gas Co. drilled its test on the A. E. Conner farm through the Big Lime formation, a gasser good for 1,000,000 feet a day.

On Indian Fork, Grant district, Cabell County, 2 miles west of Beckett station,

(Continued on Page 100)



Tanks, tank cars, and loading racks such as these require constant maintenance if they are to give long, continuous service. And there is a particular method of painting which gives such steel equipment the best protection.

Five years from now will your tanks be like "B"?

The life of steel is determined not only by the kind of paint used but by the method of painting

"Save the surface and you save all"—Dutch Boy

OIL men have tried many methods for protecting their metal equipment from rust. They have found that any old kind of painting at any old time is false economy. Such painting will not keep tank, pipe line, tank car, and other steel always looking like the metal you see in plate "B."

Today they know that adequate paint protection means more than painting only when the metal first goes into service. It means more than an occasional touching up over the rust spots. The metal surface must be clean not only the first time it is painted, but for every subsequent painting. If paint is applied over rust, the rust goes on eating into the metal, and the protective power of the paint is nullified.

Even the standard three-coat red-lead covering—the best paint protection that can be used for metal—requires careful maintenance. At regular intervals this defense film must be renewed by repaintings of pure red-lead. Only by a constant inspection and paint-maintenance policy can you be sure that your metal equipment will give its full measure of service.

Because it is pure red-lead, Dutch Boy red-lead gives uniform protection against rust at all points of the covered surface. A clean metal surface that is coated, and kept coated, with Dutch Boy red-lead will never show signs of rust. Its surface, even when under the eye of a microscope, will be as even and firm as the day it left the foundry—just like the metal surface in "B."

"A"—WITHOUT RED-LEAD. The microscope shows what rust does to unprotected metal surfaces in a comparatively short time. Note the deep-rooted incrustation. The diagonal lines are file-marks made in preparing the metal cross-section for the microscope.

"B"—WITH RED-LEAD. Here the microscope shows a metal surface protected by the standard three-coat covering of red-lead. Note the perfect condition of the surface of the metal. Rust can not form here.

Dutch Boy red-lead is easy to apply and has unusual spreading power. It is impervious to air and moisture. It forms a tough, elastic film that clings so tightly that it seems to become a part of the covered surface.

You can get Dutch Boy red-lead in paste form for mixing with pure linseed oil and as a liquid ready for immediate application. The *liquid* comes in the natural red-lead color for coats next to steel and also in light and dark green, light and dark brown, and black for finishing coats. The *paste* comes in the natural color and can be shaded to browns, greens, black, etc.

When you want finishing coats of light-colored paint to reduce heat-absorption and decrease oil-evaporation, use Dutch Boy white-lead on top of first coats of Dutch Boy red-lead. Dutch Boy white-lead also has the properties that enable it to resist the penetration of air and moisture.

Write to our nearest branch for more specific information about metal protective paints.

NATIONAL LEAD COMPANY

New York, 111 Broadway; Boston, 131 State Street; Buffalo, 116 Oak Street; Chicago, 900 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 722 Chestnut Street; San Francisco, 485 California Street; Pittsburgh, National Lead & Oil Co. of Pa. 316 Fourth Avenue; Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut Street.

Litharge

For oil-refining you want litharge of correct physical character and extreme chemical purity. Our nearest warehouse can give you quick shipment of such litharge in any quantity you desire. At all times you can rely on its unvarying uniformity, for it is made by the makers of

DUTCH BOY
RED-LEAD

West Kentucky—Tennessee

By Vern T. Whitney

Vedder Oil Co. completed 100-bbl. well in Cumberland County from sand at 325 feet. Preparations being made for active drilling campaign in Cumberland County area. Four completions and four producers record for week in Warren County. Two producers and four dry holes in Allen.

BOWLING GREEN, Ky., July 7.—Operations in the Western Kentucky Field showed no improvement last week in the way of development work. However, there is quite a large amount of leasing going on in Barren, Cumberland, Hancock, Ohio and Daviess Counties. In Barren County the Carter Oil Co., Wood Oil Co., Benedum-Trees Co., J. C. S Oil Corp., Lew J. Emery Sons Co., Fred Moore, and a number of other large companies and independent operators are leasing all available acreage, and in a number of cases are paying small bonus prices, or paying rentals in advance, and agreeing to start immediate drilling. These same conditions prevail in the other counties aforementioned.

A summary of the week's work shows 20 completions with 15 producers and an initial yield of 295 bbls. Compared with the week previous, this shows 4 less completions, the same number of producers. 4 less dry holes and an increase of 91 bbls. in flush production. The wells are distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry
Warren	4	4	69	0
Allen	6	2	22	4
Owensboro	4	3	33	1
Barren	4	4	31	0
Cumberland	2	2	140	0

Cumberland County

The best well of the week in Cumberland County was the Vedder Oil Co.'s No. 2 Tompkins which started off making 100 bbls. at 325 feet. No. 1, on this farm, completed a few weeks ago, tested 17 bbls. in a stray sand from 166 to 198 feet. No. 2 failed to find this stray sand and was drilled to the lower Sunnybrook. In the top of the first Sunnybrook sand a strong flow of gas was struck which was increased by a second flow at 310 feet, top of the second Sunnybrook. Wells drilled by the New Domain Oil & Gas Co. on this same lease were porducing from the Cave sand as well as from both Sunnybrooks. That proves three producing sand. The Vedder Co. has added the fourth sand by getting a producer in the stray. The shallow drilling with the four known producing sands makes this a very valuable property as the drilling and equipping costs are low. Water was shut off in No. 1 with 6¼-inch casing at 153 feet. In No. 2 the water was shut off with the same size casing at 183 feet. Total cost of No. 1, including all pumping outfit, not including tank and power, was $975.79.

Hiland R. Smith, field manager of the Vedder Oil Co., reports that a location has been staked off on the M. C. Scott farm, adjoining the Tompkins farm on the north and that drilling will be commenced immediately. Both farms are in the Fanny Creek district about 15 miles from Burkesville and about 3½ miles north of the Tennessee line.

It is reported that a large number of oil men have arrived at Burkesville with the idea of drilling test wells throughout the entire county. Men like W. S. Raydure, who has operated in practically all of the oil fields, predict a successful field in Cumberland County. Burkesville, the county seat, the place where the first real producing oil well in the United States was brought in May 12, 1829, is due for a comeback this year provided the market permits it.

The Oil Fork Development Co., Inc., has started acitivities in Clinton and Cumberland Counties duirng the last two months by giving out acreage to reliable operators for development and hopes in this way to get activity started with the view of getting wells drilled which may open up new territory. The Oil Fork Co. is drilling a test well on the F. F. Smith farm, on Julio Bow Hollow of Bear Creek, which will be an important test. It will be carried to a depth of 200 feet below the Pencil Cave. A showing was found in the first Sunnybrook with the second Sunnybrook barren. The Pencil Cave was topped at 649 feet. It is now drilling at 660 feet and the pay below the cave should be found at any depth from 25 to 90 feet below the present depth.

The Raydure-Crescent Operating Co. has deepened No. 1 on the Lela Keen farm on Bear Creek to 343 feet. It drilled through about 17 feet of first Sunnybrook sand, shot it with 20 quarts and made about a 10-bbl. well out of what was before a 2½-bbls pumper. The rig is now being moved to a new location on the same lease and will be spudded by the first of the week.

In the Galloway Creek district, W. S. Raydure's No. 1 Will Anderson is showing for 40 bbls. after a shot at 410 feet. The well filled within 50 feet of the top after the shot and was reported to have made several flows. Col. Less Combest, who is drilling on the Hunter Short farm, in the same vicinity, is down 652 feet in his No. 1. After letting the well stand for 10 days it filled up 450 feet with oil. Drilling will be continued to the 1,000-foot depth.

At Sulphur Creek, the Kanawha Oil Co. of Pittsburgh is drilling a well 10 miles south of Burkesville, near Kettle postoffice. It is now down 1,321 feet.

Kettle Creek District

At Kettle Creek, 15 miles south of Burkesville, the Gartlan estate and the McClintock Oil Co. is down 250 feet and drilling on its No. 7 Bud Kerr; the Dayton Oil Syndicate's No. 4 Kim Crawford is on top of the first Sunnybrook at 485 feet; Fred Pederson's No. 1 Mary Scott is drilling at 410 feet. Pederson expects to reach the first Sunnybrook at about 450 feet. Indications point to a good producer on this lease; the Fownes Oil Co.'s No. 2 Lucy Logan is spudding; the Daniel Boone Oil Co. is moving a rig to No. 4 Logan to drill it from its present depth to 100 feet below the Pencil Cave. This well was drilled several weeks ago to the Pencil Cave, encountered at 508 feet, and found no oil in the first or second Sunnybrook sands; the Young Oil Co. is down 200 feet and drilling on its No. 3 L. Coffee; W. S. Raydure's No. 2 Cleve Blythe is still being held up with a fishing job. Col. Petit's No. 1 Bill Dodson was shut down with a fishing job at around 510 feet.

The McCormick interests are drilling No. 3 J. B. Hume to the third pay below the cave. This property is in the Judio Creek district, west of Burkesville.

At Crocus Creek, the Alta Oil Co.'s No. 1 Thomas was making headway at 320 feet; Mason and associates of Ohio were down 232 feet and drilling on the J. Parris farm.

Barren County is fast becoming the most active county in the entire State of Kentucky. At present there are 33 rigs running in 6 different sections of the field. In the Emery-Moore district, west of Glasgow, 14 wells are drilling, in the northeast extension, 10 drills are going downward, in the southwest district 3 wells are making hole and in the extreme northern part of the county, the Hiseville district, 4 rigs are working, while in the Smith's Grove district two wells are progressing.

Four completions were reported, all of them being in the Emery-Moore Pool. Humes& O'Neil finished their No. 1 Jim Lewis for a 4-bbl. pumper at 520 feet, 190 feet below the shale. A large quantity of gas was struck at 35 feet below the shale. On the Neeley tract, Kopel and associates got a 2-bbl. pumper at 480 feet. The Elem Oil & Gas Co.'s No. 10 Warder started off making 7 bbls. at 525 feet. The Houchins Leasehold Co. finished its No. 5 Ziegler at 567 feet, 187 feet below the shale, for 18 bbls.

In the pool to the west of Glasgow and its northeast extension three different producing sands have been discovered below the shale making it very attractive to the small producers who cannot afford to drill for the deeper sands in Warren County. The oil tests 44 gravity and is of high gasoline content and is readily purchased by the Paragon Development Co. and other pipe line companies.

Warren County

Warren County again showed a 100 per cent week with four completions, all of which were producers. This is the third consecutive week that this percentage has been maintained, and is something out of the ordinary. The best completion was that of Cunningham & Henry in their second venture on the Bryant farm, in the McLemore-Gillespie-Price pool, which started off making from 35 to 45 bbls. at a total depth of 1,157½ feet. No. 3 was spudding at 40 feet.

In the Sandidge Pool, northwest of Bowling Green, Makeever Brothers of Boston, Mass., one of the largest operating companies in Kentucky, finished their No. 9 Young for a 5-bbl. pumper at 641 feet. Sand from 613 to 632 feet was shot with 60 quarts. This concern is starting No. 10 on the same farm and is rigging up to drill on the Sandidge farm.

T. A. Sheridan, large independent operator, completed his initial well on G. Davenport 1,000 acres, Davenport Pool, the last of the week for a 15-bbl. starter in the Mississippian lime at a total depth of 784 feet. In the same distirct, the Petroleum Exploration Co. got a 14-bbl.

(Continued on Page 94)

East Central Texas

By Staff Correspondent

CORSICANA, Tex., July 5.—The Richland Field, in Navarro County, continues to feature the East Central Texas area. During the week in review a number of very good wells were completed in that district while a considerable number of new operations were reported.

In Richland district, the Boyd Oil Co.'s No. 3 Webb, White survey, pumped 396 bbls. the first 13 hours from sand at 2,966-72 feet; No. 4 Webb pumped 258 bbls. the first 15 hours from broken sand at 2,935-55 feet. The Godley Oil Co.'s No. 3 Allison, flowed 650 bbls. the first day from sand at 2,938-79 feet; No. 5 Allison was good for 450 bbls. from sand at 2,968-79 feet. The Hallmark Oil Co.'s No. 1 Webb pumped 215 bbls. from sand at 2,918-58 feet. No. 2 was preparing to pump and No. 3 pumped 400 bbls. from sand at 2,935-53 feet; No. 4 pumped 450 bbls. from sand at 2,951 to 2,962 feet. The Humble Oil & Refining Co.'s No. 1 Sheffield made 400 bbls. a day on air from sand at 2,970-2,976 feet. There was 4 per cent of water. Miller Lewis' No. 1 Swink tested salt water at 3,093 feet and is shut down for orders. The Sun Oil Co.'s No. 5 Brown, White survey, pumped 448 bbls. in 24 hours from sand at 2,922-50 feet. The company has other wells drilling on this farm. Stroube & Stroube's No. 1 Davis, White survey, had an initial production of 300 bbls. on the pump from sand at 2,925 feet. Tucker and others' No. 1 Davis, John White survey, made 2,500 bbls. of fluid, 25 per cent water and 9 per cent b.s. from sand at 2,935-65 feet.

G. Moore's No. 1 Hillburn, on the John White survey, was tested dry at 3,020 feet and was abandoned.

The Oxford Oil Co.'s No. 1 Davis, Choate survey, got sand at 2,915-64 feet and pumped 350 bbls.

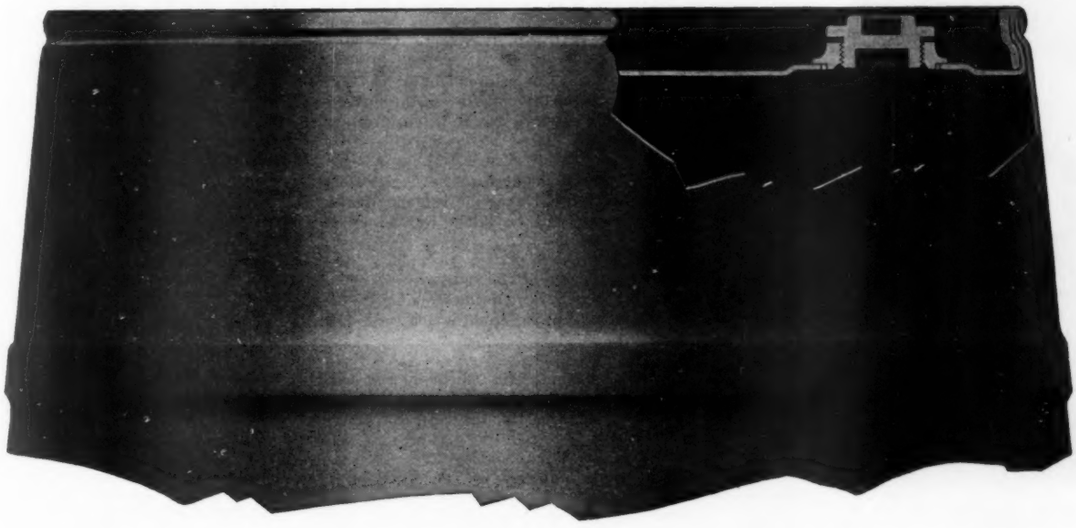
In Powell Field

The Gulf Production Co.'s No. 3-A McKie, Buffington survey, Powell Field, was making 7,000,000 feet a day of dry gas at 3,076-3,113 feet. The Roxana Petroleum Co.'s No. 9 McKie, Broyles survey, was abandoned at 1,795 feet. E. L. Smith Oil Co.'s No. 5 Cerf, Smith survey, swabbed 290 bbls. the first day from sand at 1,978-94 feet. The Tidal Oil Co.'s No. 11-A Ramsey, Smith survey, was good for 30 bbls. a day at 1,527-80 feet. The Texas Co. & Magnolia Petroleum Co.'s No. 22 Kent, Smith survey, made a 25-bbl. pumper from broken sand at 1,396 to 1,665 feet. Garland Kent's No. 1 J. F. and Laura Allen, Matthews survey, was abandoned at 2,400 feet. The same operator's No. 1 Allen, on the Smith survey, was abandoned as dry at 3,262 feet. This test also got a dry sand at 900 to 1,060 feet. Garland Kent's No. 1 Boyd, Matthews survey, had an initial production of 75 bbls. a day at 1,005 feet. It was not drilled in because of a lack of storage. Garland Kent's No. 1 Boyd, Smith survey, tested salt water at 1,200 to 1,240 feet and was abandoned. The Sims Oil Co.'s No. 15 J. T. Rose is a 20-bbl well, in sand topped at 850 feet. The Skelly Oil Co.'s No. 9 Keith, on the Mathews survey, got sand at 2,936 to 2,947 feet. It swabbed 1,680 bbls. of fluid, 18 per cent water, the first 18 hours. It is estimated as a 2,000-bbl. well.

Outside of the Powell Field, the Cranfill & Penn test on the Trammell farm, Simonton survey, was abandoned at 3,082 feet. G. Johnson abandoned at 3,280 feet his No. 1 Skiles, Mitchell survey.

The Tidal Oil Co. is rigged up to drill No. 7-C Ramsey, Smith survey; Birdwell & Gray's No. 1 Harvard, Mathews survey, is rigged up; Brandon & McCamey, No. 1 Woolens, Mathews survey, rigged.

In the Richland district, Navarro County, Trout and others have a derrick up for No. 1 Roach, on the Ford survey. Collins and others are shut down on No. 1 Fishing Club land, total depth 2,923 feet. There was a small showing at 2,099 feet. Esslick and others' No. 1 Morgan was temporarily abandoned at 2,953 feet. McIntyre and others are drilling a test on the Mrs. Richards farm, Coate survey, at 450 feet.



Complete Drainage— Yet Complete Protection

Notice how the head sheet of the G-E-M Bilged Steel Barrel is offset around the openings. It insures complete drainage. And at the same time, by elevating the plugs safely above the danger line, seepage of any foreign liquid accumulation from the outside is prevented.

Yet this feature does not expose the openings. When the G-E-M Bilged Steel Barrel is dropped on its head the plugs are protected by that welded-rolled chime which absorbs the jolts of rough handling.

Write for your copy of this catalog

Buy the G-E-M Bilged Steel Barrel in 55 gallons capacity, black, galvanized or tinned.

Also Presteel I. C. C and Light Gauge Drums and a variety of special containers.

The Petroleum Iron Works Company

Pressed Steel Products Department
Sharon, Pa.

New York **St. Louis** **Tulsa** **Houston** **Casper** **San Francisco**

MEN KNOWN IN OILDOM

H. E. Johnston

H. E. Johnston, vice president in charge of sales for the Producers & Refiners Corporation, Denver, Colo., entered the oil business in the Rocky Mountain region by way of several years of experience in Texas and along the Gulf Coast. His first experience in the oil business was at Beaumont, in 1905, when he became identified with The Texas Company as secretary to the sales manager, moving to Houston with the company headquarters in 1908.

In the summer of 1911 he was transferred to Denver as field representative for The Texas Company, pioneering new territory in Colorado, Wyoming and Montana. In the latter part of 1917 he was made superintendent for the Rocky Mountain Division of The Texas Company with headquarters in Denver. He continued in this capacity until 1919 when he joined the forces of the Producers & Refiners Corporation as salesman in its Rocky Mountain division. On July 1, 1922, Mr. Johnston took up his headquarters in the Wrigley Building, Chicago, as general sales manager for the Producers & Refiners Corporation. He was later made a vice president and moved back to Denver with the closing of the company's offices in Chicago.

PERSONAL PARAGRAPHS

A. S. Henley, chief geologist for the Houston Oil Company, is on a trip to Arkansas fields.

* * *

Edwin W. Smith, Houston, Tex., geologist, associated with David Donoghue, is recovering from an operation for appendicitis.

* * *

Harry Kassebaum of the California Petroleum Corporation, Los Angeles, is expected to return soon from a short vacation trip.

* * *

George Ferguson, formerly of Copleston, Ont., has returned to visit friends in Canada on a furlough of six months from Egypt.

* * *

Alf Harper of Oil Springs, Ont., has gone to Colombia, South America, where he will drill for the International Petroleum Company.

* * *

J. C. Lindsay, general manager for the Marine Oil Company and Western Pipe Line Company, Casper, Wyo., is visiting relatives in California.

* * *

L. W. Hitchcock, Mid-Continent representative of the Novo Engine Company, returned to Tulsa last week after an extended trip over the territory.

A. E. Freeland, superintendent of the Wiser Oil Company, Sistersville, W. Va., was married recently to Miss Georgia Connolly, of Leon, W. Va.

* * *

J. H. Raney of the Marland Oil Co. of California, stationed in Los Angeles, has resigned to devote his entire time to his own interests in that State.

* * *

George Burke and wife have returned to Petrolia, Ont., from Peru, where Mr. Burke has been employed by the International Petroleum Company.

* * *

W. A. Martin, general superintendent of the Sinclair Oil & Gas Company in the Mid-Continent fields, was a recent visitor to the Houston, Tex., offices.

* * *

Harry Snell, superintendent for The Texas Company in the Chicago district, has resigned due to illness and his place will be taken by Sidney B. Wright.

* * *

D. F. Vickers, manager of the southern credit department of the Sinclair Refining Company, has returned to Houston, Tex., from a business trip to New York.

* * *

V. E. (Triplex) Baum, Mid-Continent representative of Yale & Towne, is greeting friends in Tulsa, having returned from a trip through the Rocky Mountain fields.

* * *

W. J. Ranbarger, manager of the Tulsa office of the Henry H. Cross Company, will return soon from a vacation trip spent in Terra Haute, Ind., and Chicago.

* * *

W. L. Neubeck of Marietta, Ohio, formerly vice president of the Link Oil Company, has been made president of that company following the recent death of G. C. Best.

* * *

William Hussey and and W. Gardiner of Petrolia, Ont., have contracted with W. W. McRae to drill in the Mexican fields for the Kern-Mex Oil Company. They left for Mexico last week.

* * *

M. B. Schuster, an independent operator in the Salt Creek Field of Wyoming, has returned to his home in Joliet, Ill., after an inspection trip through the producing fields of Wyoming.

* * *

William Kammerer, superintendent of the Holly Oil Company, operating in the San Joaquin Valley of California, has purchased a ranch near Pomona, where he is now making his home.

* * *

Patrick M. Longan, general manager of International Petroleum Company, and other Mexican Seaboard subsidiaries in Mexico, has left for an extended vacation to the United States.

* * *

W. G. Cummins of the Gas Engineering & Construction Company, is driving through to the lake region of Pennsylvania from his home in Tulsa. He will return about the middle of July.

* * *

W. H. Betts, of the Empire Gas & Fuel Company, Oil Hill, Kans., outlined the growth of the oil industry in Kansas for the members of the Chamber of Commerce at Emporia, Kans., recently.

* * *

John P. West, scout for the Prairie Oil & Gas Company in the Corsicana, Texas, Field, was a visitor in Tulsa last week on his return from a vacation in Ohio where he visited his father.

* * *

H. D. McCracken, manager for the Transcontinental Oil Company at Fort Worth, Tex., has returned from an inspection tour of the Big Lake Oil Company operations in Reagan County, Tex.

* * *

F. E. Hurley of Findlay, Ohio, vice president of the Ohio Oil Company, who is in charge of the company's operations in the Rocky Mountain region, has returned recently from a trip to Europe.

* * *

E. J. Cullinan, vice president and general manager of the Penn Manufacturing & Supply Company, of Washington, Pa., and Joseph Cullinan of Cisco, Tex., also connected with the company, visited Tulsa and the Mid-Continent fields last week interesting producers in the Zahniser derrick foundations.

James Shaw, Thomas Ferguson and J. Burns of Essex, Ontario, who were signed up as drillers by W. W. McRae of Petrolia, Ontario, for work in the South American fields, left for that continent recently.

* * *

V. B. Day, formerly treasurer of the Empire Companies, Bartlesville, Okla., who is now in charge of the treasury division of the Chicago office of the Cities Service Company, was visiting friends in Bartlesville recently.

* * *

William Rhoads, an old-time operator in the San Joaquin River Valley of California, has recently moved his residence to Hollywood, while maintaining the offices of the Rhoads Oil Company at Huntington Beach.

* * *

R. S. Ellison, in charge of field operations for the Midwest Refining Co. in the Rocky Mountain region, is taking a combined business and pleasure trip through southern Colorado, northern New Mexico and the Texas Panhandle.

* * *

James McKeegan and Don McGregor of Oil Springs, Ont., are on the way back to their homes in Petrolia, Ont., after several months in the Peruvian oil fields. George Porter of Petrolia, Ont., is reported returning from Persia.

* * *

P. E. Landrus, formerly lease foreman for the Petroleum Exploration Company at Leeco, Ky., was recently made assistant superintendent. Henry Tucker of that company has been appointed to succeed Mr. Landrus as lease foreman.

* * *

M. L. Freeze, vice president of the Altitude Petroleum Company, Tulsa, is now in New York City on a business trip. Harold B. Anson, sales manager of the company, returned last week to Tulsa after spending three months visiting the jobbing trade in the Middle West.

* * *

J. H. Finn, who has been chief clerk for J. H. McCue, in charge of The Texas Company's production offices at Fort Worth, has been transferred to the accounting department and will audit the division office's books in the southern and southwestern sales department.

* * *

John M. Ford, in charge of the operations of the Transcontinental Oil Company in the Rocky Mountain division, is in Houston, Tex., to move his family to Denver, Colo. Mr. Ford was formerly in charge of operations in north Louisiana and the Gulf Coast region.

* * *

F. J. Huffman, ranking official of the Penn Mex Fuel Company, with headquarters in Pittsburgh, Pa., has arrived at Tampico on an inspection tour of the company's properties. He wah met at Tampico by J. M. Reardon, general manager of the Penn Mex in Mexico, with headquarters at Tuxpam.

* * *

W. R. Capron, of the Tulsa offices of the Sinclair Pipe Line Company, formerly with the same company in Casper, Wyo., was visiting old friends in the latter city while looking after Sinclair interests on a recent inspection trip which took him through the Rocky Mountain fields.

* * *

D. S. Bushnell of New York, president of the Northern Group of Pipe Lines; J. A. Bartlett of Oil City, superintendent; J. P. Blackburn, Oil City, director, and W. H. Flann, superintendent of telegraphy department, attended a directors' meeting of the company at Pittsburgh, Pa., recently.

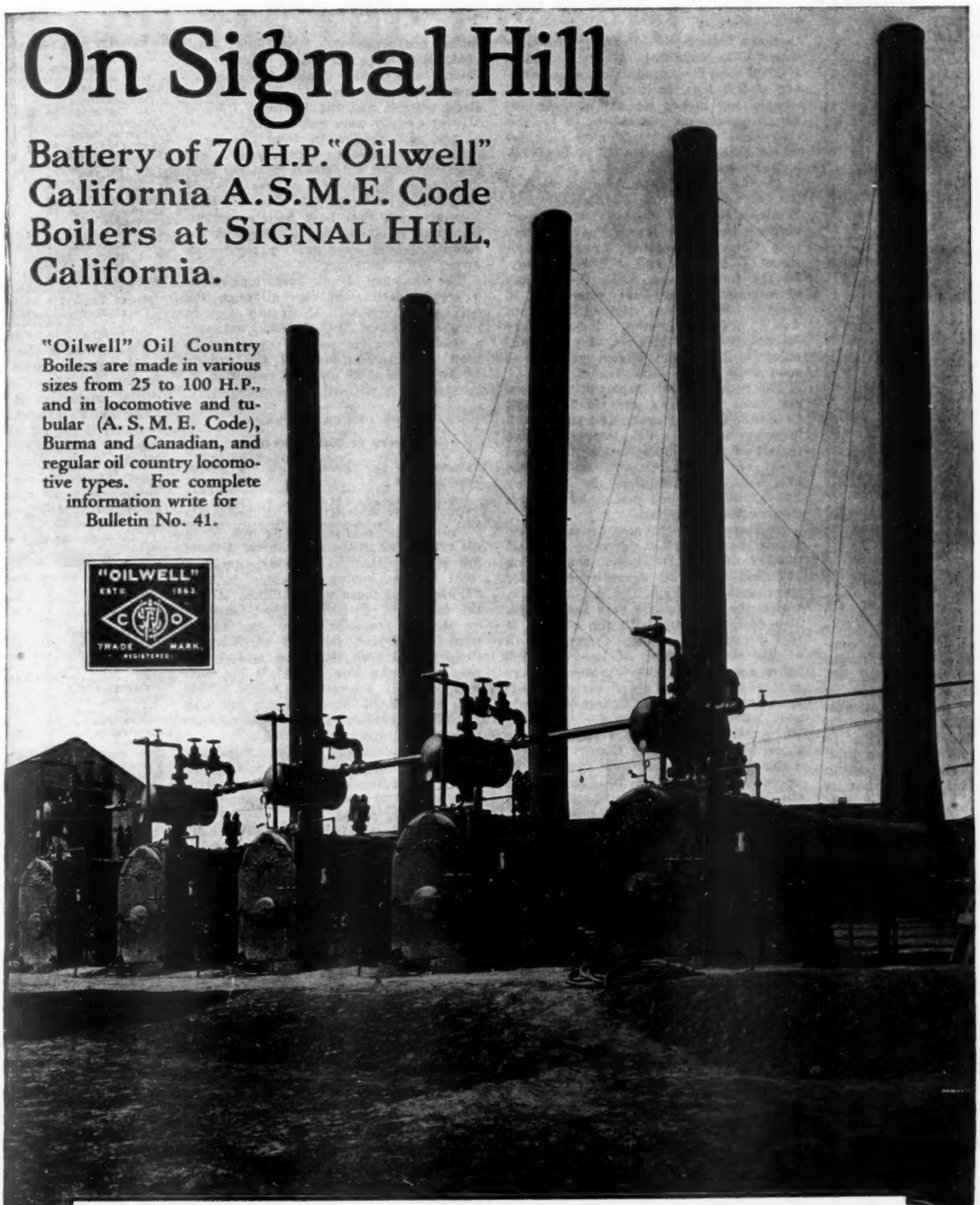
* * *

C. W. Lewis has been appointed sales manager of the Cities Service Refining Company, Boston, Mass., the new oil division of Henry L. Doherty & Company, New York. Mr. Lewis entered the employ of the Doherty Companies in 1916 and for some time was superintendent of steam power for the Empire Gas & Fuel Company at El Dorado, Kans. He later became connected with the Empire Refineries, Inc., and from 1919 until coming to Boston, was district sales engineer for the National Petroleum Corporation at New Orleans, La. He became connected with the Cities Service Refining Company last October, and succeeds O. J. Tuttle, who was made sales manager of the Empire Refineries, Inc.

On Signal Hill

Battery of 70 H.P. "Oilwell" California A.S.M.E. Code Boilers at SIGNAL HILL, California.

"Oilwell" Oil Country Boilers are made in various sizes from 25 to 100 H.P., and in locomotive and tubular (A. S. M. E. Code), Burma and Canadian, and regular oil country locomotive types. For complete information write for Bulletin No. 41.



OILWELL SUPPLY CO

NEW YORK - LONDON - TAMPICO - PITTSBURGH, U.S.A. - SAN FRANCISCO - LOS ANGELES

World's Largest Manufacturers of Oil Field Equipment

Initial Production Shows Big Decline

Flush Output of Wells Completed East of California in June
Nearly One-third Less Than for May. Less New Work

SUMMARY OF ALL FIELDS
Wells Completed

Field—	Comp.	Prod.	Dry	Gas
*Eastern	376	1,430	52	74
Lima	63	1,070	6	1
Indiana	12	146	6	1
Central Ohio	24	91	0	19
Kentucky-Tenn.	178	2,832	42	3
Illinois	24	735	5	0
Kansas	81	9,803	22	3
Oklahoma	514	111,884	126	38
North Central Texas	339	21,907	110	8
East Central Texas	27	4,260	13	0
Louisiana-Arkansas	215	33,949	26	26
Gulf Coast & S. W. Tex.	134	26,297	44	10
Wyoming	54	10,003	1	3
Montana	16	585	6	1
New Mexico	3	600	1	0
Total June	2,060	225,591	460	187
Total May	2,234	329,444	542	185
Difference	174	103,853	82	2

Rigs and Wells Drilling

Field—	Rigs	Drg.	Ttl.
*Eastern	144	376	520
Lima	9	65	74
Indiana	2	22	24
Central Ohio	50	81	131
Kentucky	8	263	271
Tennessee	1	15	16
Mississippi	2	18	20
Alabama	0	11	11
Georgia	1	3	4
Florida	5	9	14
Illinois	2	19	21
Kansas	73	226	299
Oklahoma	246	1,205	1,451
N. Central Texas	109	387	496
E. Central Texas	13	104	117
Louisiana-Arkansas	103	382	485
Gulf Coast & S. W. Texas	177	602	779
Wyoming	118	336	454
Montana	21	154	185
Utah	1	29	30
Colorado	11	36	47
New Mexico	3	10	13
Total June	1,109	4,353	5,462
Total May	1,161	4,420	5,581
Difference	52	67	119

*Allegany field lacking.

The initial production of wells completed in the oil fields east of California during June was nearly one-third less than the flush output of completions in May. The decrease in this flush oil output amounted to 103,853 bbls., the initial production during May amounting to 329,444 bbls., while that for June total 225,591 bbls. The Allegany Field in New York is lacking in this total but its flush output is small. New York also showed a decrease in June as compared to May.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Washington-Nowata-Rogers	0	0	0	0
Osage	145	38,824	24	4
Tulsa	42	5,320	13	5
Okmulgee	59	4,763	21	8
Okfuskee-Hughes,Seminole-McIntosh	57	29,932	16	5
Muskogee-Wagoner	23	489	6	0
Creek	54	9,674	18	0
Pawnee	14	2,453	2	1
Payne	2	0	2	0
Kay	33	16,880	5	4
Garfield-Noble	7	413	0	0
Carter	39	2,738	6	4
Stephens	17	97	2	4
Miscellaneous	22	301	11	3
Total June	514	111,884	126	38
Total May	598	106,509	178	47
Difference	84	5,375	52	9

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Washington-Nowata-Rogers	0	6	6
Osage	40	199	239
Tulsa	11	34	45
Okmulgee	20	69	89
Okfuskee-Hughes-Seminole-McIntosh	54	198	252
Muskogee-Wagoner	2	15	17
Creek	40	116	156
Pawnee	9	40	49
Payne	2	13	15
Kay	9	89	98
Garfield-Noble	7	66	73
Carter	14	104	118
Stephens-Cotton	4	19	23
Miscellaneous	34	237	271
Total June	246	1,205	1,451
Total May	266	1,342	1,608
Difference	20	137	157

Although the number of completions in the Oklahoma fields during the month of June dropped back toward the April figure the initial production jumped to the extent of 5,375 bbls. Of the 514 June completions, an even 350 were oil producers with a combined initial ouptut of 111,884 bbls., or an average of 319 bbls. per well. This was 34 bbls. higher than the individual well average for May when 373 completed oil wells totaled 106,509 bbls. flush production, or an average of 285 bbls. each. While the June completions lacked 84 of equalling the May number, the percentage of productive wells was slightly higher as there was a difference of only 23 in the number of producers.

The areas which contributed most of the increase were the Okfuskee-Hughes-Seminole-McIntosh district, where completions in the Cromwell Pool of Seminole County accounted for the major share of the gain, and in Tulsa County. In the former area, while the number of completions in June was only 15 greater than in May, the initial output was 15,577 bbls. greater. Tulsa County jumped from 758 bbls. in May to 5,320 bbls. in June, due almost entirely to good wells to the Vern-Bruner pools.

The regions which displayed the greatest losses were Kay and Garfield-Noble Counties, Carter County and the miscellaneous districts. The latter was due to lack of new completions in the Stroud Field of Lincoln County, and in the first mentioned counties, the Tonkawa Field failed to yield much new production during the month.

As forecast last month, the field operations show a further decrease, the total number in the Oklahoma fields being 157 less than the figure reported for the month of May. The drilling wells, which showed a slight gain last month, also declined along with the number of rigs during June. Osage County led all of the rest in extent of loss with 105 fewer operations. This was due in large part to the drilling up of the new Burbank tracts. The July figures will probably show another increase, however, when more tracts are disposed of at the June 30 auction. Kay County reported a further drop, being now down to 98 operations, practically 100 fewer than the county had in April. Carter County also lost considerably, and Garfield-Noble, and other counties lost a few. About the only districts to show any gain were the Okfuskee-Hughes-Seminole-McIntosh country, and Creek County. The familiar Cromwell Pool is plainly apparent behind the gain of the Seminole area.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	8	20	6	1
Montgomery-Wilson-Neosho-Allen	0	0	0	0
Miami-Franklin-Anderson	0	0	0	0
Greenwood-Woodson	60	6,210	12	0
Marion	0	0	0	0
Chautauqua-Elk	2	110	0	0
Miscellaneous	11	3,463	4	2
Total June	81	9,803	22	3
Total May	143	14,758	31	9
Difference	62	4,955	9	6

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Butler	1	8	9
Montgomery-Wilson-Neosho-Allen	0	8	8
Miami-Franklin-Anderson	0	7	7
Greenwood-Woodson	41	62	103
Marion	4	4	8
Chautauqua-Elk	2	7	9
Miscellaneous	25	130	155
Total June	73	326	399

While completions in the Kansas fields dropped back to a point slightly above the March figure, average initial production per oil well seems to be steadily mounting. In March this average was only 6 bbls. per well (obtained after subtracting the number of gassers and dusters from the total number of completions and dividing the remainder into the total initial output.) In April, the average rose to 113 bbls. per well, in May it increased to 143 bbls. and in June it reached the high figure of 175 bbls. In the latter month, 81 wells were finished in comparison with 143 during May, a loss of 62. The June total of initial production was 9,803 bbls., 4,955 bbls. less than in May. Greenwood County and Cowley County furnished almost the entire amount. The Rainbow Bend district and the Eastman Pool of Cowley County were responsible for most of the new production from the latter county. Greenwood completions, however, numbered only 60 with 6,210 bbls. production in June, in contrast to 71 completions with 10,830 bbls. in May. Several areas that have been contributing quite a bit of new productions for several months were not represented in June.

The summary of new operations shows a steady decline in rigs although the drilling wells remain about the same in number. Fewer rigs, however, indicates a tendency on the part of operators to limit their operations and the coming weeks should find another reduction in the total.

EAST CENTRAL TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Navarro	22	4,260	8	0	4	66	70
Miscellaneous	5	0	5	0	9	38	47
Total June	27	4,260	13	0	13	104	117
Total May	55	20,566	18	1	23	96	119
Difference	28	16,306	5	1	10	8	2

Completions in the east central district fell off more than half during June, the total number having amounted to only 27, and 13 of those were failures. About the only area that created any interest or showed possibilities for the future was the Richland district of Navarro County, and even that area looked less rosy when the Sun Oil Co.'s big well was seriously crippled by water. This well made 2,865 bbls. initially but was not officially completed so does not appear in the report.

The miscellaneous districts furnished nothing but dry holes again this month and hopes of developing a big field northeast of Powell have dwindled almost to the vanishing point.

Operations remained stationary during the month, with 10 fewer rigs reported but an increase of 8 drilling wells so that the difference in the total was only two operations. A greater decrease should be noticeable next month as fewer new operations are started and the present tests are completed.

NORTH CENTRAL TEXAS

Including June 19, 1924

District—	Comp.	Prod.	Dry	Gas
Wichita	73	5,037	18	0
Burkburnett	15	290	5	0
Eastland	20	670	4	3
Stephens County	13	1,530	1	3
Young	12	280	9	0
Archer County	177	15,110	57	0
Wildcats	29	990	16	2
Total, June	339	21,907	110	8
Total, May	290	27,023	106	3
Difference	49	5,116	4	5

Summary of New Work

District—	Rigs	Drg.	Total
Wichita Wilbarger	22	59	81
Burkburnett	2	19	21
Eastland	7	35	42
Stephens	13	64	77
Young	6	17	23
Archer	26	92	128
Wildcats	23	101	124
Total, June	109	387	496
Total, May	129	426	555
Difference	20	39	59

With 49 more completions there was 5,116 bbls. less new production in the North Texas Field in June. In Wichita County there was an increase of 20 completions with 2,375 bbls. more production. In Stephens County there were 9 less completions and 1,270 bbls. less production. There were 42 more completions in Archer County but 6,466 bbls. less.

In Archer County there were 92 drilling instead of 148 in May, the total operations in that county being 128 against 190 in the former month.

NORTH LOUISIANA AND ARKANSAS

Summary of Field Operations

Districts—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union County, (Smackover-El Dorado)	93	23,322	2	4	33	144	177
Ouachita Co.: (North Smackover)	63	5,905	2	3	33	83	121
Stephens Field: (Columbia & Ouachita Co.	3	85	0	0	4	14	18
Nevada County	3	80	1	0	3	10	13
Bellevue	9	172	1	0	1	6	7
Caddo	5	85	1	0	1	17	18
Claiborne	0	0	0	0	0	9	9
Cotton Valley	5	4,400	2	1	9	31	40
De Soto	0	0	0	0	1	1	2
Red River	1	0	1	0	0	3	3
La. wildcats	20	0	2	18	8	48	56
Ark. wildcats	13	0	13	0	6	27	33
Total June	215	33,949	26	26	103	382	485
Total May	219	40,215	19	10	124	408	532
Difference	4	6,266	7	16	21	26	47

Operations in the north Louisiana and south Arkansas fields resutled in the completion of 215 wells with an aggregate initial production of 33,949 bbls., 26 dry holes and 26 gas wells. June proved essentially a gas month, having a potential capacity of 447,000,000 feet. Extensions in the Cotton Valley district was the most interesting feature of the month's development, all other districts showing an appreciable decline in activity.

GULF COAST

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	3	90	1	0	1	3	4
Blue Ridge	1	700	0	0	0	3	3
Big Creek	1	1,000	0	0	2	4	6
Barber Hill	0	0	0	0	2	9	11
Damon Mound	2	0	2	0	0	3	3
Edgerly (La.)	3	210	1	0	0	3	3
Goose Creek	8	265	3	0	1	24	25
Humble	4	165	1	0	1	5	6
Hull	20	5,465	6	2	5	20	25
Jennings (La.)	2	0	2	0	0	3	3
Markham	0	0	0	0	2	9	11
Orange	15	3,180	4	0	1	21	22
Pierce Jct.	0	0	0	0	0	2	2
Spindletop	5	165	1	0	2	3	5
Saratoga	5	40	3	0	3	5	8
Sour Lake	5	40	2	0	2	3	5
Vinton	4	410	1	0	2	7	9
West Columbia	3	110	1	0	2	6	8
Miscellaneous: (Gulf Coast)	8	0	8	0	..	..	..
Total June	94	11,830	36	2	26	114	140
Total May	101	18,915	48	0	30	127	157
Difference	7	7,085	12	2	4	13	17
Southwest Fields—							
Luling	6	12,000	0	3	24	58	82
Laredo	14	1,075	4	1	4	30	34
Somerset	4	42	0	0	2	5	7
Calliham	11	310	3	2	5	8	13
Rockdale-Minerva	3	40	0	1	2	11	13
Miscellaneous	2	0	1	1	114	386	500
Total S. W. for June	40	14,467	8	8	151	488	639
Total S. W. for May	59	71,450	12	5	146	388	534
Difference	19	56,983	4	3	5	100	105
Gr. total	134	26,297	44	10	177	602	779
Gr. total, May	160	90,365	60	5	176	515	691
Difference	26	64,068	24	5	1	87	88

In the Coastal pools and southwest fields combined a total of 134 wells were completed during June, with 26,297 bbls. new production, 44 dry holes and salt water wells and 10 gassers. Compared with May this is a decrease of 26 in wells completed and a decline of 64,068 bbls. new production with 24 less dry holes and salt water wells.

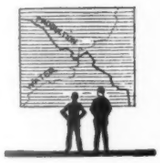
In the Gulf Coast pools, 94 wells were completed with 11,830 bbls. new output and 36 dry holes or salt water wells. Compared with May this is a decrease of 7 in the number of completions and of 7,085 bbls. initial production with 12 less failures. Rigs declined 4 and wells drilling fell off 13 during the month.

In the southwestern fields 40 wells were completed in June, 19 less than in May. The new production aggregates 14,467 bbls. compared with 71,450 bbls. in May. The failures total 8, or 4 less than in May. The United North & South Oil Co. has ceased all development work in the Luling Field, which accounts for the drop in completions and new production there.

Wildcat work in the Coastal region is

For the Sake of the Future As Well As the Present—

Cement Cable-Tool Casings



When an operator comes up to you and says,

"It looks as if Well No. So-and-So is about through—production's falling off and she's showing an increasing amount of water,"

—you're probably hearing a statement that you've heard time and time again. Have you ever stopped to consider, however, that possibly some of these wells are coming to an end years before their time—that possibly, if they had been properly **completed,** they would still be profitable producers for years to come?

When a well begins to produce, further precautions are dismissed as unnecessary.

When a well is completed, you know, and proves to be a profitable producer, with little or no water trouble, it is only natural to conclude that it is a success. A comparatively small amount invested in absolute security—such as that entailed by scientific oil well cementing—is regarded as unnecessary.

But the **ultimate production** of a well is not governed by the production of the first six months. Eventually the price of false economy is paid—in the form of lessened production, cut oil and an untimely end of operations.

EXIT THE OIL; ENTER THE WATER

The water demons are ever ready to break in.

Everybody knows that newly touched sand rich in oil will resist a small amount of water **at first.** But as the oil begins to leave the sand, water, ever-ready, begins to trickle in—around the shoe, through corroded casing and in other ways. Having a greater surface tension than oil, it clings stubbornly to the interstices, doing its worst to retard the flow. Production falls off, water troubles begin, and the operator wonders why—without realizing that the reason dates back to the time the well was drilled, when a comparatively small amount invested to safeguard the big investment would have given numerous advantages at once and years of extra production later.

Scientific oil well cementing is an insurance policy covering real hazards.

Doesn't it stand to reason that an investment in drilling ranging from $15,000 upward deserves the one bit of added protection that guards it against the most serious hazards that can befall a well? With so much at stake, does it pay to take the chance of shifting formations, of frequent collapse and corrosion of the casing—with the heavy expense of pulling; of damage when "shooting," of an insecure seat? Does it pay to take the chance of having water, unnoticed at first, come into the sand, slow up production, produce other well known troubles and eventually close the well years before its time?

The Halliburton mixer mixes 100 sacks of cement in 6 minutes.

The Halliburton method of scientific oil well cementing is recognized as the leading method because the protection it gives is so certain and absolute. Oil well cementing must be extra-speedy—the Halliburton mixer mixes 100 sacks of cement every 6 minutes. In oil well cementing it is important to know at all times the exact location of the column of cement in the hole—the patented Halliburton measuring line is the only sure method of getting this information. The Perkins process known as the "two-plug process" but covering also the use of one plug, has long been known as the most advanced method ever devised. Halliburton controls it in the Mid-Continent. Four thousand successfully cemented Halliburton wells attest the success of the Halliburton method of scientific oil well cementing.

Sound reasons, all of these, why, if you wish to give your investment in drilling the protection it demands, it will pay you to get in touch with us.

ERLE P. HALLIBURTON

Recognized Leader in Scientific Oil Well Cementing

Duncan **Oklahoma**

very limited and confined largely to known saline domes. Twenty-seven of the total completions in the Coastal pools were "worked over" holes, revived and put in the producing list.

WYOMING

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy ..	0	0	0	0	0	5	5
Salt Creek ..	45	7,668	0	*0	76	126	202
Lance Creek .	2	2,040	0	0	0	3	3
Warm Spgs...	1	100	0	0	5	18	23
Big Horn Basin	0	0	0	0	5	17	22
Lost Soldier .	1	0	0	1	10	44	54
Rock River .	1	175	0	0	1	21	22
Fremont Co. .	1	0	0	1	2	18	20
Mule Creek ..	0	0	0	0	0	2	2
Osage	1	20	0	0	8	10	18
Natrona	0	0	0	0	1	17	18
Lincoln Co....	0	0	0	0	3	10	13
Baxter Basin.	1	0	1	0	2	13	15
Miscellaneous.	1	0	0	1	5	32	37
Total June	54	10,003	1	3	118	336	454
Total May	57	15,711	0	1	97	306	403
Difference.	3	5,708	1	2	21	30	51

MONTANA

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek ...	0	0	0	0	1	21	22
Sunburst	15	585	6	0	25	35	60
Miscellaneos..	1	0	0	1	5	98	103
Total June	16	585	6	1	31	154	185
Total May.	12	6,960	2	1	22	156	178
Difference..	4	6,375	4	0	9	2	7

COLORADO

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June ...	0	0	0	0	11	36	47
All of State for May ...	0	0	0	0	11	26	37
Difference ..	..	.....	..	..	..	10	10

UTAH

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June....	0	0	0	0	1	29	30
All of State for May ...	1	0	1	0	1	25	26
Difference..	1	.....	1	..	..	4	4

NEW MEXICO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June ...	3	600	1	0	3	10	13
All of State for May ...	2	1,047	0	0	0	6	6
Difference..	1	447	1	..	3	4	7

With approximately the same number of completions in Wyoming, production decreased 5,708 bbls., mostly in Salt Creek, while Lost Soldier Field was off 1,000 bbls. There were 46 more operations in Salt Creek at the close of the month.

Montana reported 6,375 bbls. less new production than in May.

EASTERN FIELDS

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Bradford	97	232	1	0
Middle Field	13	40	0	1
Ven.-Clarion	55	78	5	3
But-Arm	15	20	3	4
S. W. Pennsylvania	15	55	2	6
West Virginia	91	274	21	49
S. E. Ohio	90	731	20	11
Total June	376	1,430	52	74
Total May	368	1,248	53	64
Difference	8	182	1	10

Rigs and Wells Drilling

	Rigs	Drg.	Ttl.
Bradford	20	98	118
Middle Field	2	5	7
Ven. Clarion	4	19	23
But.-Arm.	4	31	35
S .W. Pennsylvania	4	31	35
West Virginia	77	121	198
S. E. Ohio	27	88	115
Total June	144	376	520
Total May 31	160	394	554
Difference	16	18	34

The flush output of wells completed in the eastern fields during June exceeded that for May, even with the Allegany Field report lacking. Operations in the southwest Pennsylvania, West Virginia, and southeastern Ohio fields did not differ very much from the May record. There were a few more completions, an increase in new production, the same number of dry holes and a small increase in gas wells. Weather conditions were favorable and no doubt the increase all along the line would have been much greater had not the market suffered a reduction. The cut of 50 cents was the most discouraging feature of the month.

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Licking	0	0	0	0	0	1	1
Knox	0	0	0	0	1	5	6
Ashland	1	0	0	1	8	7	15
Medina	1	0	0	1	6	9	15
Lorain	0	0	0	0	1	3	4
Wayne	9	66	0	5	11	24	35
Richland	5	0	0	5	0	2	2
Hocking	0	0	0	0	1	3	4
Holmes	4	25	0	3	10	16	26
Coshocton	0	0	0	0	3	0	3
Jackson	0	0	0	0	2	0	2
Athens	3	0	0	3	5	6	11
Meigs	0	0	0	0	1	0	1
Crawford	0	0	0	0	0	1	1
Cuyahoga	1	0	0	1	0	2	2
Summitt	0	0	0	0	1	2	3
Total June ...	24	91	0	13	50	81	131
Total May ...	59	258	14	33	38	72	110
Difference	35	167	14	14	12	9	21

June developed into an inactive month for completed wells in the Central Ohio Field, as the gas companies took things very easy, and the oil end was quieter than usual. The heavy rains caused more or less trouble throughout the fields extending from Lake Erie to the Ohio River.

The report for the month shows but 24 wells completed, of which 5 were oil wells, with a new production of 91 bbls., and 19 were gas wells. One redeeming feature is that no dry holes were reported. When compared with the figures for May this is a decrease of 35 wells, 167 bbls. in new production, 14 less dry holes and 14 less gas wells.

New work shows an improvement, as the close of the month shows 50 rigs up and building, and 81 wells drilling, a total of 131, while the total at the close of May was 110, an increase of 21.

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	19	224	2	0	2	16	18
Hancock	5	51	0	1	4	4	8
Allen	6	49	0	0	0	2	2
Auglaize	4	43	1	0	0	5	5
Sandusky	0	0	0	0	0	1	1
Mercer	14	126	3	0	0	9	9
Van Wert	1	80	0	0	3	1	4
Seneca	0	0	0	0	0	3	3
Lucas	0	0	0	0	0	1	1
Ottawa	8	72	0	0	0	4	4
Darke	4	125	0	0	0	4	4
Shelby	0	0	0	0	0	6	6
Paulding	2	300	0	0	0	5	5
Hardin	0	0	0	0	0	2	2
Michigan	0	0	0	0	0	2	2
Total June .	63	1,070	6	1	9	65	74
Total May ..	59	577	10	2	7	57	64
Difference ..	4	493	4	1	2	8	10

The completion of two wells above the average in the Payne Field of Paulding County, adds much to the production of the old Lima Field of northwestern Ohio, for June, and leads the way for an active development in that county that was overlooked in the early days of the rush. Any time wells with a flush production of 100 bbls. or better can be found in the Trenton Rock Field, the field that holds them gets a play. Wood and Mercer Counties took the lead for new work and the wells averaged fairly good.

During June a total of 63 wells were completed with 6 dry holes and one gas well, the new production amounting to 1,070 bbls. When compared with May the figures show an increase of 5 in completed wells, 493 bbls. new production, and a decrease of 4 in dry holes and 1 less gas well.

New work has also improved for the close of June shows 9 rigs and 65 drilling wells, against 7 rigs and 57 drilling wells at the close of May, a net gain of 10.

ILLINOIS

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Drg.	Ttl.
Clark	8	327	1	0	7	7
Cumberland	0	0	0	0	1	1
Crawford	4	12	1	0	3	3
Lawrence	1	15	0	0	1	1
Marion	2	125	0	0	0	0
Clinton	0	0	0	0	1	1
Monroe	1	20	0	0	0	0
Douglas	1	0	1	0	1	1
Coles	1	0	1	0	1	1
Wabash	4	206	1	2	3	4
Jackson	2	30	0	0	0	0
Union	0	0	0	0	1	1
Jefferson	0	0	0	0	1	1
Total June ...	24	735	5	2	19	21
Total May ..	17	657	6	5	24	29
Difference ..	7	78	1	3	5	8

The Illinois Field showed an improvement for June over May in new completions, there being 24 new wells brought in, with 5 dry holes and 735 bbls. new production, against 17 wells, 6 dry holes and 657 bbls. for May, an increase of 7 in completed wells, and 78 bbls. more flush production, and a decrease of 1 in dry holes.

New work takes a slump, as at close of June there were 2 rigs and 19 wells drilling, while the close of May there were 5 rigs and 24 drilling wells, a loss of 8.

The wells of value were found in the stray sand field of Martinsville Township, Clark County, and in the Wabash County Field, others being very light pumpers.

INDIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wells	0	0	0	0	0	1	1
Jay	4	85	1	0	1	12	13
Adams	0	0	0	0	0	1	1
Huntington	0	0	0	0	0	1	1
Delaware	1	0	1	0	0	1	1
Randolph	0	0	0	0	0	1	1
Gibson	4	60	2	0	1	2	3
Knox	1	0	1	0	0	0	0
Sullivan	2	0	1	1	0	0	0
Harrison	0	0	0	0	0	1	1
Laporte	0	0	0	0	0	1	1
Hendricks	0	0	0	0	0	1	1
Total June ...	12	145	6	1	2	22	24
Total May	21	422	7	4	1	29	30
Difference ...	9	277	1	3	1	7	6

Only two worth while wells were brought in during June in the Indiana Field. One of these wells was in the Hotmire Pool, in Pike Township, Jay County, with 55 bbls. and the other in Center Township, Gibson County, in the Princeton Field, in southwestern Indiana, with a production of 50 bbls. Quietude prevailed over the field, owing to the heavy rains, making it impossible to move material on leases.

June shows a total of 12 completions, 6 dry holes, 1 gas well and 145 bbls. new production, which compared with the May figures is a decrease of 9 in completed wells, 277 bbls. in new production, 1 less dry hole and 3 less gas wells.

The close of June shows a slump in new work, there being but 2 rigs up and 22 wells drilling, a net decrease of 6 from the May figures.

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg	Ttl.
Wayne	2	6	1	0	2	8	10
Powell	2	15	1	0	0	2	2
Estill	3	20	0	0	0	1	1
Wolfe	0	0	0	0	0	1	1
Lee	16	715	0	0	3	16	19
Morgan	1	0	1	0	0	0	0
Lawrence-Johnson	12	280	0	0	0	34	34
Johnson-Magoffin	11	93	0	0	0	28	29
Allen	41	638	16	0	0	37	37
Warren	23	303	4	0	0	35	35
Barren	29	224	4	0	0	26	26
Simpson	1	3	0	0	0	3	3
Cumberland ..	14	317	11	0	0	22	22
Monroe	0	0	0	0	0	6	6
Owensboro	10	51	3	0	0	14	14
Russell	0	0	0	0	0	8	8
Metcalf	0	0	0	0	0	2	2
Owsley	3	30	0	1	0	1	1
Hopkins	3	100	0	0	0	1	1
Hardin	0	0	0	0	0	1	1
Breathitt	0	0	0	0	0	1	1
Rowan	0	0	0	0	0	1	1
Laurel	0	0	0	0	0	2	2
Elliott	3	17	0	0	1	4	5
Floyd	1	15	0	0	1	2	3
Harlin	0	0	0	0	1	0	1
Pike	0	0	0	0	0	1	1
Owen	0	0	0	0	0	1	1
Bell	0	0	0	0	0	1	1
Adair	0	0	0	0	0	1	1
LaRue	0	0	0	0	0	9	1
LaRue	0	0	0	0	0	1	1
Henderson	0	0	0	0	0	1	1
Boyd	1	5	0	0	0	0	0
Kentucky	178	2,832	42	3	8	263	271
Tennessee	0	0	0	0	1	15	16
Mississippi ...	0	0	0	0	2	18	20
Alabama	0	0	0	0	0	11	11
Georgia	0	0	0	0	1	3	4
Florida	0	0	0	0	5	9	14
Total June ..	178	2,832	42	3	17	319	336
Total May ..	175	4,175	38	5	17	311	328
Difference ..	3	1,343	4	2	0	8	8

Regardless of the recent cut in the price of Kentucky grades of crude, the month of June made a very interesting development, although there was a heavy decrease in the new production, compared with the May output, as during the previous month a 1,500-bbl. well swelled the production, whereby there was a decline in June of 1,343 bbls. During the month a total of 178 wells were completed, with 42 dry holes, 3 gas wells, and a flush of 2,832 bbls., compared with May, an increase of 3 in completed wells and 4 more dry holes, and 2 less gas wells.

There were at the close of June 17 rigs up and 319 wells drilling, against the May report of 17 rigs and 311 wells drilling, a net gain for June of 8.

Lee County, in the new Idamay district had 16 completions with 715 bbls. flush, while Allen County led in completed wells with 41, and a new flush of 638 bbls. Barren County was second in completions, with 29, followed by Warren County, with 23.

3 Oil Wells and 7 Dry Holes Record Of Kevin for Week

SHELBY, Mont., July 5.—Three oil wells and seven failures was the week's record of the Kevin-Sunburst Field. One of the oil wells is an unusually good producer. The two other oil wells were not large but are classified as paying producers.

The Queen City Oil Co.'s No. 2 Moore permit, SW cor. SE NW, Section 4-34-2w, which was estimated at 500 bbls. a day when it came in, flowed at the rate of 35 bbls. an hour during the past week. The Queen City Oil Co. is offsetting it on the south and the Johnson Syndicate has a rig up for a west offset.

The B. C. Montana Oil Co.'s No. 3 Stannard, CWL SE NE, Section 25-35-2w, drilled in a flowing well on June 22 getting the Ellis sand at 1,460 feet and drilling to 1,475 feet. The well is good for more than 40 bbls. a day and is the third paying producer the company has had on this property. The sands on this side of the field appear to run more regularly than in other parts of the Kevin-Sunburst area and it is expected that a larger percentage of oil wells will be drilled thereabouts.

The California Oil Co. appears to have a good well in No. 3 McKee, CSL SE NE, Section 35-35-2w. The top of the Ellis was found at 1,470 feet and the well was drilled to 1,502 feet, about 2 feet into the lime. It is a north offset to a 60-bbl. well. Its production will be given later. The Mutual Oil Co.'s No. 7 Helmerichs, CSL SE NW, Section 22-35-2w, will make a 25-bbl. well. It was shot in sand at 1,363-92 feet.

The Queen City Oil Co.'s No. 4, Moore, SE cor. SE NW, Section 5-34-2w, formerly carried as Elliott & Callender, was a failure. It was drilled to 1,512 feet. There was a show of oil at 1,506 feet and sulphur water was drilled into at 1,509 feet. The well was low on the structure. The Sunburst sand was found at 1,232-52 feet and it, too, was dry.

The Homestake Development Co.'s No. 1 Helgard, SW cor. NW SW, Section 5-34-2w, was another failure. It was drilled into sulphur water at 1,515 feet.

The Mutual Oil Co.'s No. 2 Neilson, NE cor. SW NW, Section 20-35-2w, drilled into sulphur water at 1,610 feet after getting a very small showing at 1,557 feet and at 1,575-77 feet. This is the second failure on this lease.

Newton & McMurray plugged their No. 1 Corey, NW cor. SW NW, Section 4-34-2w. There was two feet of very tight sand at 1,452-54 feet with no showing of oil and a very small showing at 1,475 feet. It was shot but with no results. It is an east offset to a 250-bbl. well drilled in May 9 by the Seattle-Foster interests.

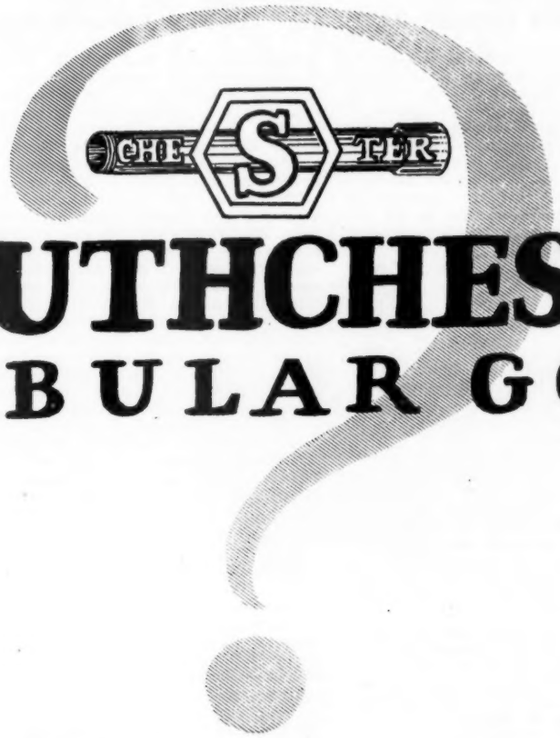
Whitman's No. 1 Corey, a north offset to the Newton & McMurray failure, and located in the SW cor. NW NW, Section 4-34-2w, had tight sand and was abandoned at 1,487 feet after a shot had failed to bring production.

The Ohio Oil Co.'s No. 1 Morum, SW cor. NE NE, Section 4-34-2w, had a small showing at 1,481 feet and was shot in sand at 1,431-87, but it did not help any and the hole was abandoned.

There are 162 producing wells in the Kevin-Sunburst Field, 14 producing gas wells, 76 dry holes on structure and 16 off structure, 27 drilling wells and 23 rigs up, according to the tabulation of the Mid-Northern Oil Information Bureau.

CENTENNIAL ANNIVERSARY

This year marks the centennial anniversary of the Plymouth Cordage Co. In an announcement of the fact, the company takes the occasion to pledge a continuance of the high quality standards which it says have characterised Plymouth rope and binder twine.



SOUTHCHESTER
TUBULAR GOODS

Yes! we have them—and hundreds of other quality lines for the oil field on which we are ready to give you real

—Service—

just tell us your needs

INTERNATIONAL SUPPLY CO.

Branch stores in 23 of the leading oil field towns in Oklahoma, Kansas, Wyoming, Colorado and Texas.

General Offices and Works
Tulsa, Okla.
District Offices: Denver, Colo.,
Fort Worth, Texas and El Dorado, Kans.

NATURAL GAS DEVELOPMENTS

JAPANESE REPORT BIG PRICE INCREASES HERE

Remarkable increases in prices of crude and refined products in America are given as reasons for the strengthening of the petroleum market in Japan by the Petroleum Times, published in Tokio. That publication has the following to say of market conditions in Japan:

General Oil Market

"Under the influence of the remarkable increases in prices of crude petroleum and its derivatives in America, Japanese oil market has shown the strengthening tendency some time since.

"And an impression appears to exist that the change rate of Yen is a good barometer of the Japanese oil market from the marketer's point and if so, under the present rate, imported goods cannot exercise excessive rigor over our market, it seems.

Gasoline

"The election campaign all over Japan and the continued days of bright sunshine and warmer weather in the large cities resulted in the increased sales of gasoline, though the season for gasoline demands is still ome week ahead. The outlook for gasoline is very bright and as to its future, price changes will depend largely upon the prices of imported goods, which must be rather powerless to disturb the Japanese gasoline market under these abnormal against exchange conditions of Yen value.

"Thus oil men are enjoying and will continue to enjoy a good sale until a strong revival movement of Yen value will develop. But even at present cheap imported gasolines, now in hand of marketers, are demoralizing the market and preventing it from a proper development, to some extent, but it is doubtful whether there will be a sharp advance in Yen value in the near future.

Kerosene

"Kerosene is also rather firm in tone because of the firm attitude of oil companies and besides cheap kerosenes were already sold up. But as the winter and spring demand is sliding off, further advances in price cannot be anticipatable and at present consumers are generally taking only sufficient goods to cover immediate needs.

Neutral

"Excepting the heavy haul of sardines at Choshi, fishing activity at many localities have not been yet animated enough and oils for fishing boats have been weakened in tone. And there has been more pressure to sell, as the appearance of the cheap goods by Kyodo-Hanbaisho is quite possible to be expected.

Machine Oil

Business failed to show the expected gain and the market has been showing weakness.

In conclusion the following were the average market prices for the month of May on the different products of crude petroleum sold by the oil companies which are engaging in Japanese oil business in the influential scale.

Gasoline

Red Shell (Rising Sun)	9.70—10.00
Automobile (Nippon Oil)	9.40— 9.50
Socony No. 1 (Standard)	9.50

Kerosene

Shirokomori (Nippon Oil)	6.70— 7.30
Tiger (Standard)	6.80— 7.40
Tank (Rising Sun)	6.80— 7.50

Neutral Oil

Akazensho (Nippon Oil)	5.30— 5.60
Kin-Nibu (Ashahi)	4.90— 5.20
Kin-Keiyu (Kyodo Hanbaisho)	6.20— 6.50

Machine Oil

C. Machine (Nippon Oil)	6.60— 6.80
Ogura No. 1 (Ogura)	6.20— 6.50
Kydo Machine (Kyodo Hanbaisho)	6.20— 6.50

INCREASED SERVICE FOLLOWS HIGHER RATE

TOLEDO, Ohio, July 7.—James W. McMahon, general manager of the Northwestern Ohio Natural Gas Co., has issued orders directing the expenditure of $100,000 for the installation of gas mains to supply service to 1,000 homes. The order came as the result of the recommendation of the council's gas and light committee that the company be permitted to increase rates to all but the small consumers, effective probably in the November bills.

The present and proposed net rates follow:

Amount—	Now	Proposed
First 5,000 feet	35c	35c
Next 5,000 feet	45	50
Third 5,000 feet	55	60
Next 20,000 feet	65	75
All over 35,000 feet	—	85

Present rate is 65 cents a thousand feet for all over 15,000.

Present readiness to serve charge of 75 cents is retained.

The ordinance will govern charges until May 1, 1925, when Mr. McMahon promised he would report the earnings to the council. He predicted that by the imposition of the 85-cent charge for large consumers the ordinance will drive many to resort to coal or other heat, leaving a greater gas supply for the small consumers during the winter months. He reported that 55 per cent of those now served use on an average less than 5,000 feet a month the year around, and that large consumers take 26 per cent of the supply during five months of the year for an average of only 14.05 per cent of the supply for the 12 months.

LIGHTNING STRIKES GASSER

GREAT FALLS, Mont., July 5.—Lightning struck the derrick of the California Co. on Bowes Dome, Blaine County, and set fire to a flow of gas estimated from 10,000,000 to 25,000,000 feet per day and destroyed the rig. A steam line was laid and the fire was extinguished. Timbers are due to arrive soon to start a new derrick. The California Co. will case off the flow of gas, or control it, and continue. The present depth is about 1,120 feet, after having developed 65 feet of sand in the Eagle, from which the gas is coming.

None of the crew was injured in the fire. This is the first time in the history of Montana that a gasser has been struck by lightning.

F. M. ENGLISH PROMOTED

F. M. English has been appointed assistant sales manager of Reading Iron Co., to succeed A. F. McClintock, whose resignation was announced June 1. Mr. English joined the Reading Iron Co. in 1919 and established the Pittsburgh branch for the company. Willingness to apply his knowledge of wrought iron pipe to the buyers' problems, and his untiring effort and well grounded business judgment reputed him to be a wise counsel on pipe problems. The new duties of Mr. English demand a service to buyers of oil country tubular goods, and the experience he has gained in this department has equipped him to assume the responsibilities of this promotion.

RATES REDUCED AT ENID

OKLAHOMA CITY, Okla., July 5.—The State Corporation Commission has ordered burner tip gas rates in Enid reduced from 75 cents to 50 cents, 1,000 feet. The gas company accepted the reduction without protest, according to a statement from the commission officers. The reduction followed when the Oklahoma Gas & Electric Co., the distributing company, made arrangements to purchase gas from the Deer Creek Gas Co. instead of the Oklahoma Natural at a lower rate.

DROP GAS USE LIMIT IN NEW CARBON BILL

SHREVEPORT, La., July 7.—After a conference with carbon black manufacturers and others interested in the gas situation connected with the carbon industry in northeast Louisiana, a substitute bill was introduced by Senator Hood of Ouachita Parish, and presented to the Senate Committee on conservation.

The original bill, also introduced by Senator Hood, provides that not more than 275,000,000 feet of gas can be burned into carbon black in any one day. The new bill does not limit the amount of gas to be used in the manufacture of carbon black. The reason given for eliminating this limit is the discovery that permits have been issued by the conservation department for 110,000,000 feet per day to be consumed by carbon plants not yet constructed, and, according to a statement made by Dudley Berwick, Commissioner of Conservation, these permits cannot be revoked.

Conservation features of the new bill provide that the back pressure shall not be under 200 pounds and tend to reduce the number of wells to be drilled on a given amount of acreage.

SCHOOL LAND LEASE SALE

Announcement has been made that the Commissioners of the Land Office of the State of Oklahoma will receive sealed bids until 2 o'clock p. m. on July 29, for oil and gas leases on certain of its School and State lands. Each bidder will be required to accompany his bid with a certified check or bank draft in the sum of $1,000, payable to the Commissioners of the Land Office as a deposit of earnest money to insure the execution of the lease by the bidder, and the furnishing of the bond as required by law. One deposit will be sufficient for any number of bids.

Bonuses shall be payable in cash. No bid of less than $2 per acre will be considered, and each bid must be accompanied with a drilling contract, that the bidder will, if awarded a lease, drill a well within one year to the depth at which oil and gas is usually found, in paying quantities, in the field in which said lands are located, and will be required to give bond in a sufficient sum, to be fixed by the Commissioners of the Land Office, to guarantee the drilling of said well.

The number and description of the tracts offered are as follows, to-wit:

Tract No. 1, NE Section 26, Township 7n, Range 16w, 160 acres; No. 2, N half of N half of SE, Section 26, Township 7n, Range 16w, 40 acres; and No. 3, N half of N half of SW, Section 26, Township 7n, Range 16w, 40 acres.

CROMWELL GASSER BLOWS IN

OKMULGEE, Okla., July 5.—Snowden & McSweeney Co.'s No. 1 Epley, in the southwest corner of the northwest of the northeast of Section 15-10-8, Cromwell Pool, blew in at 3,417 feet and is making 20,000,000 feet of gas. This well had been shut down for several week at 3,415 feet, awaiting the outcome of the Cromwell shutdown meeting, and when penetrated but 2 feet, blew in.

HIGHER RATE FOR CINCINNATI

CINCINNATI, Ohio, July 7.—Stating that an increased gas rate for Cincinnati is justified by added operating costs, President W. W. Freeman of the Union Gas & Electric Co., proposed to the City Council that the initial rate of 50 cents for the first 5,000 feet should be increased to 75 cents. The present schedule of gas rates expires next December. Mr. Freeman's proposal included a reduction in the rate with increase in quantity consumption.

ANALYSIS OF GASES IN CANADIAN WELLS

CHATHAM, Ont., July 5.—It has been definitely determined that, unless some unexpected developments justify a change of plans, no drilling will be done by Imperial Oil, Ltd., this season in the Irma-Wainwright Field of eastern Alberta. Two tests have been drilled by jImperial Oil, Ltd., Fabyan No. 1, Section 18-45-7w4 and Fabyan No. 2, Section 14-45-8w4. No. 2 secured nothing whatever of commercial value. No. 1 secured a large gas production but no oil. No. 2 has been widely advertised by outside interests as an "oil gusher." R. T. Elworthy of the Department of Mines at Ottawa made a series of tests of the Fabyan No. 1 some time ago and his report on these tests is as follows:

"When the valve was opened a quantity of dark brown colored heavy fluid shot into the air to a height of about 50 or 60 feet, followed after a few minutes by a stream of water and gas. The examination of this fluid is not yet completed, but it is believed to be an emulsion of a heavy oil and water and of no commercial value as crude oil. In a little while after the valve was closed the rock pressure reached 600 lbs. per square inch. Two tests were made for the gasoline content of the gas, but no gasoline hydrocarbons were found to be present. The results of the analysis of the sample of gas collected is as follows: Carbon dioxide, 0.3 per cent; oxygen, 0.8; methane, 88.6; ethane, 2.6; nitrogen, 7.7. This confirms the results of the gasoline test."

East of Coutts, no further work has been undertaken by the Canadian Oil & Refining Co., and its big gasser on Section 29-1-11w4 is still shut in. Latest information is that after blowing open for some hours the gasser shows a production of 23,000,000 feet a day, instead of the reputed production of 65,000,000 feet. Analysis of the gas, which is at last available, shows the following constituents: Methane, 94 per cent; ethane, 1.8 per cent; carbon dioxide, 0.8 per cent; oxygen, 0.4 per cent; nitrogen, 3.0 per cent. There is an incidental helium production varying, in four samples tested, from .083 to .110 per cent, as compared with 0.33 per cent in some of the Bow Island gases and 0.36 per cent in the Barnwell Field. The gas is clearly a dry gas; though there are traces of gasoline, they are too slight to justify commercial extraction. The next probable development in this area will probably be the drilling of a test lower on the structure where the huge gas flow will not be encountered and the oil possibilities of the structure can be tested; but so far no definite decision has been made as to further work.

It is reported British Petroleums, Ltd., has secured from the Dominion Government a carbon black permit, entitling it to use up to 10,000,000 feet a day of its production in the manufacture of carbon black. The city of Edmonton is opposing this concession, on the ground that the Irma-Wainwright and Viking gas areas are probably portions of the same field, and that even if the use of gas for carbon black does not exhaust the Viking Field, it will deprive Edmonton of a secondary source of supply.

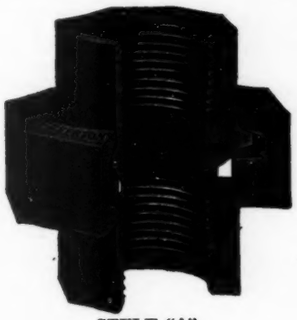
MANAGER APPOINTED

MIAMI, Okla., July 5.—The appointment of George Matthews of Bartlesville as manager of the Consumers Gas Co., effective July 1, has been announced by the Empire Companies. W. T. Watters, who has been manager for several years, is retained as superintendent of operations with the care of the physical property in charge.

Jefferson UNIONS and FLANGES

Adapted to All Working Conditions

Look for the Name on the Nut



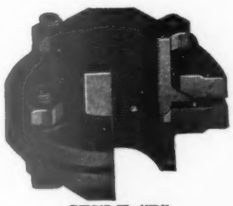
STYLE "A"

Be Sure It's a Jefferson

There is a Jefferson Union Flange for every purpose—made for that purpose, and perfectly adaptable to all working conditions. These unions and flanges are of the very highest grade and are made of the very best materials and workmanship obtainable. All unions and flanges are made of high-grade, air-refined malleable iron, carefully inspected and properly tested, with a ground ball, base-to-iron joint which cannot corrode. No gasket required.

Style "B," three-part flange is an unusually easy flange to apply, being made with a movable collar which eliminates considerable force in bringing the bolt holes opposite each other and resulting danger of breaking the flange or rupturing the pipe end on which the pressure is being applied. This flange saves a lot of time and is recommended for 200 pounds working steam pressure.

Style "D," two-part flange is the handiest two-part flange on the market. It has a Jefferson spherical ground, brass-to-iron joint which enables it to make up tight even when the pipes are not in line, and is recommended up to 500 pounds working steam pressure.



STYLE "B"

This flange is also made in Style "E," an extra heavy flange recommended for working pressure up to 1000 pounds.

Why not standardize on Jefferson Unions? It will pay you. We carry in stock a full line of all the styles and sizes of Unions and Flanges.

Write for new catalogue or let our salesman call and specify the style Unions and Flanges best adapted for your conditions.

STYLE "D"

Be Sure It's a Jefferson

QUALITY SERVICE PRICE

The Continental Supply Co.

General Offices: St. Louis

Export Office: 2 Rector St., New York

London Office: Finsbury Court, Finsbury Pavement, London E. C. 2, England

QUALITY SERVICE PRICE

MORE THAN 70 STORES IN THE OIL COUNTRY

115

EQUIPMENT AND SUPPLIES

STEEL PRODUCTION FOR HALF YEAR HELD WELL DESPITE FLUCTUATIONS

By B. E. V. Luty

PITTSBURGH, Pa., July 7.—Reviewing the half-year in the steel industry now ended, it is remarkable if not amusing to note how little change there has been in production, when the whole half year is taken, by comparison with the sharp increase and then decrease there was in the rate. In the first couple of months or so of the year the rate of steel ingot production increased about 45 per cent, and then after holding the high rate, which indeed was the record high rate in the history of the industry, for a couple of weeks or so, the rate went down about 60 per cent. Yet the total production in the half year was not greatly dissimilar from production last year, as the following figures will show, ingot production in gross tons:

First half, 1923 23,350,000
Second half, 1923 20,150,000
First Half, 1924 19,500,000

A continuance of the low rate of production the industry has now reached would make only about 10,000,000 tons for the second half of this year. Unless general commercial and industrial conditions have become very poor indeed, which no one pretends to assert, the half year's production is going to be much more than 10,000,000 tons. In other words, there will have to be a substantial upturn. As practically everyone seems to be in decidedly unhopeful mood for the next two months, the best guess would be that many are going to be surprised by a revival coming before they are now disposed to look for it.

No Change in Situation

In the past week there has been no discernible change in the general steel market situation. Taking steel mill products as a whole, the current buying represents about 25 per cent of capacity, perhaps a trifle more. The steel mills no longer have any backlog business, on old orders, of any consequence, except in the two lines, rails and freight car material, in which there are orders that will keep up for several months to come. These two combined represent 10 to 12 per cent of the steel capacity. Thus it appears that the steel mills are likely to run at, say, 35 to 40 per cent of capacity this month, and until there is a decided increase in the volume of buying.

The pipe trade continues to be one of the best lines in the steel industry, being in fact the best outside of rails. The pipe mills are commonly estimated to be running at about 65 per cent of capacity, though perhaps the trade estimates are a little too sanguine.

There continues to be complaint about light buying of merchant pipe, the alleged reason being that jobbers are liquidating stocks, but these stocks ought to have been liquidated before this if there had been a reasonably good demand. As to oil country tubular goods, orders continue to come in fairly well, but practically all the orders are rush and there is no assurance that they will continue.

Pipe and Tinplate

Line pipe orders reported in the past two months make a total of about 80,000 tons, which would be at a rate of 480,000 tons a year, but for six months previous there had been much lighter buying than this, and last year's actual production of line pipe may be estimated at about 500,000 tons, so that this year promises a great falling off in that item, even though the requirements in casing, tubing, etc., may keep up fairly well.

The Steel Corporation has booked two tinplate orders, aggregating about 40,000 boxes, for shipment to Japan for oil cases. The Standard Oil Co.'s long pending inquiry for 150,000 boxes of tinplate for making cans for expert oil still hangs fire. The domestic market on tin plate is fairly well held on the long standing basis of $5.50, but direct export tin plate is available at much less, also tin plate for making export consumers, on which there is English competition as the Government allows a rebate of the duty when the containers are exported.

NEW WELDER SAVES TIME AND EXPENSE IS CLAIM

An increase in production of 10 times the footage per hour and large cost savings are claimed as a result of the adoption of automatic arc welding by the Wayne Tank & Pump Co., at Fort Wayne, Ind., in assembling underground gasoline tanks. Previous to the adoption of arc welding, the tanks are welded by oxy-acetylene gas.

These tanks are made from ⅛-inch galvanized sheet iron cut in three sections, with the assembled tank having three seams each 120 degrees apart and 116 inches long. The circumference of each tank is 118 inches. For the assembly of the tanks, an automatic arc welder built by the General Electric Co. was installed, replacing the old gas process. This automatic machine consists of a framework for holding the tank in position and for carrying the automatic welding head and electrode supply. The joint to be welded is placed between two clamping bars and a backing-up bar. Along this seam travels the automatic welding head which feeds the electrode wire to the arc.

The procedure of welding is to take each of the longitudinal seams at either end by acetylene, each of these two tack welds being approximately 3 inches long. The plates are placed about ⅛-inch apart before tacking, but draw up tight when the gas tack is completed. Following this, they are placed on the automatic forms and the arc struck at one end and allowed to continue without breaking to the opposite end. Then the clamps are released and the tank rotated one-third of its circumference to the next seam and the automatic head welds the next seam on its return. The clamps are again released and the tank rotated to the third or last seam which is welded in the same manner as were the two previous seams.

By the old gas process, the welding was done at a speed of 7 feet per hour. With the automatic installation, production, it is said, has jumped to 75 feet per hour. The three longitudinal seams are completed in a total time of 35 minutes as against a total of three hours by the old gas process. Besides the time saving, another favorable factor is that the galvanizing on the inside of the tank adjacent to the weld is in good condition, whereas, by using the oxyacetylene process, approximately 1 inch of the galvanizing was burned away from either side of the weld, on both the inside and outside of the tank. The money saving in operation was such that the entire cost of installation was paid for in the first two months of operation.

NEW 100-FOOT COMPRESSOR

The new 100-foot Chicago Pneumatic gasoline engine-driven portable air compressor, now available, fills the much-wanted requirement for a compressed air unit handling one rock drill. This compressor will also operate two concrete busters or two clay diggers; two riveting or two calking hammers or four backfill tempers.

UNION OIL CO. FLEET HAS RADIO COMPASSES

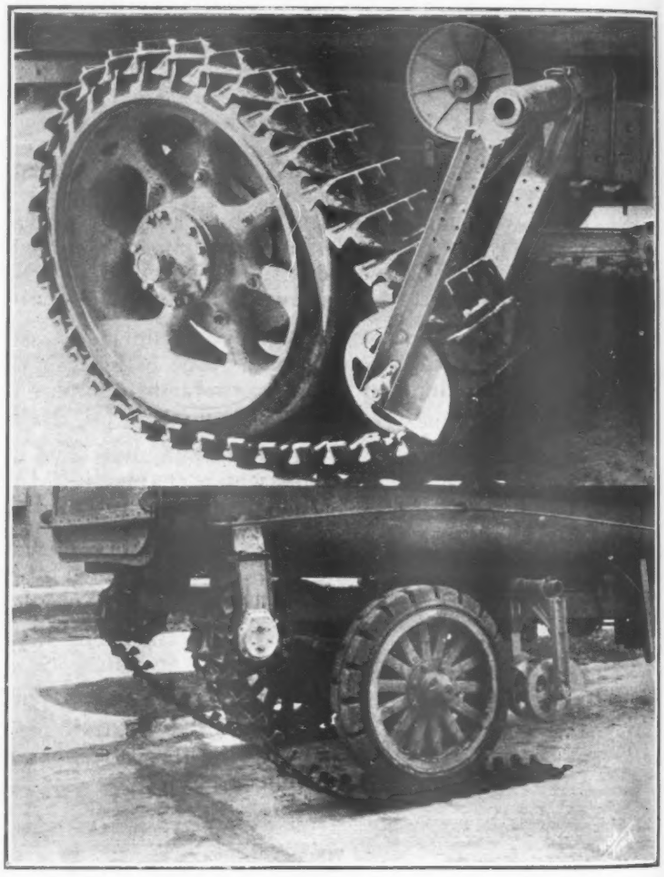
The first of a series of radio compasses to be installed on the entire deep sea fleet of the Union Oil Co. of California has been placed on the tanker La Placentia. It is especially adapted to coastwise vessels, enabling the ship master to determine his exact position at sea by communicating by wireless to the nearest land radio station.

The system is based on the equipment of selected important lighthouses and light vessels along the coast with apparatus for sending radio signals of simple and easily recognized characteristics during the continuation of fog or thick weather, by means of which the navigator of any vessel provided with a radio compass may take definite bearings to guide or to locate his ship, although no object is visible.

Aside from direct use in navigation the radio compass may be used in locating the position of a ship beyond the range of visible signals and in offshore and ocean hydrography, in locating submarine cables, in establishing offshore aids to navigation, and in locating the positions of wrecks and obstructions.

The Union Oil fleet is one of the largest on the Pacific Coast engaged in the carrying of petroleum products. Its ships ply between Los Angeles harbor and Pacific ports as far north as Alaska and as far south as Chile, South America, with regular sailings to the Hawaiian Islands. The Union Oil Co. now owns 14 steamships, 21 barges, motor boats, etc., and operates one tanker under charter, the combined total capacity being 1,038,700 bbls.

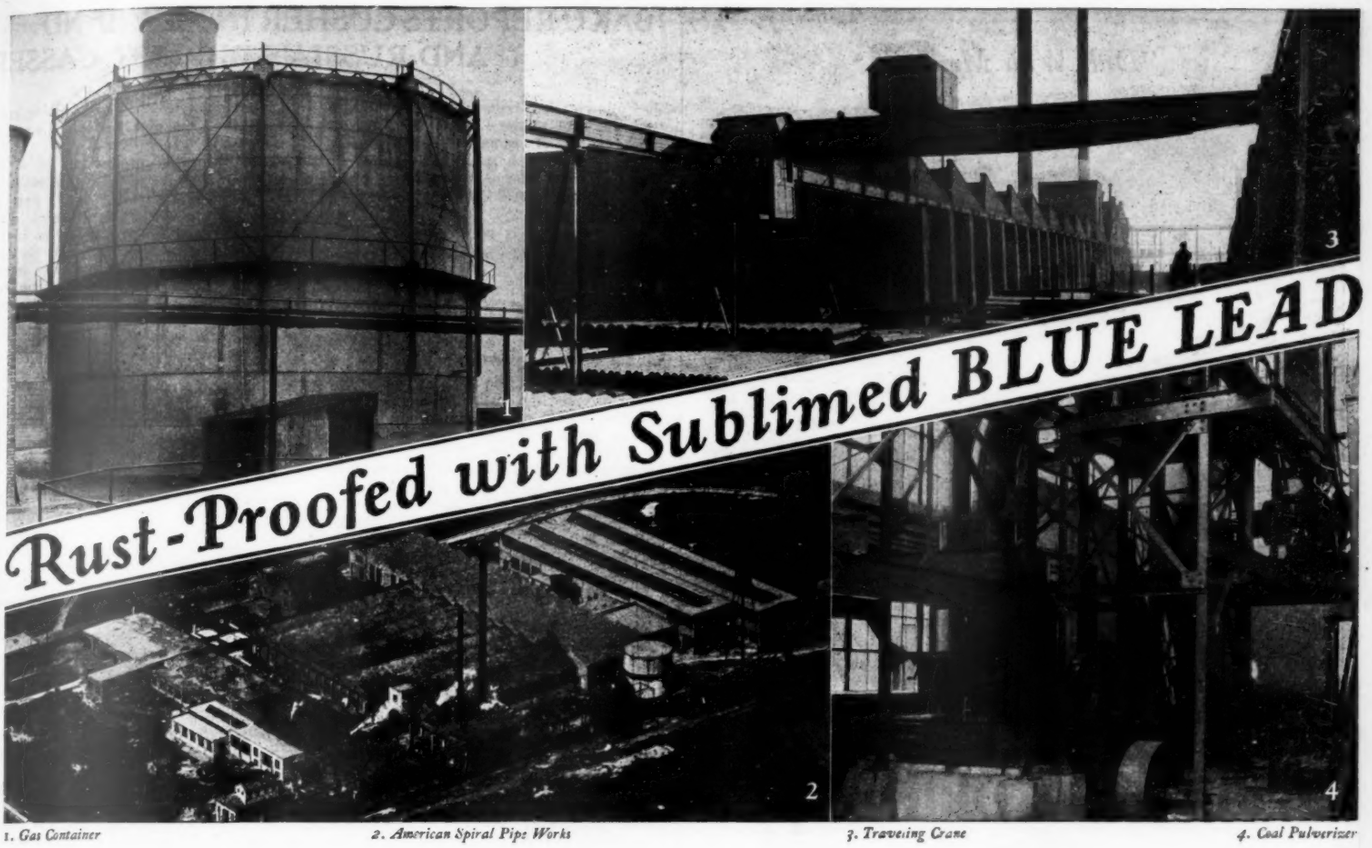
GIVES MOTOR TRUCK ADVANTAGES OF TANK



Oil fields in general and new fields and wildcat wells in particular are nearly always away from or ahead of the good roads. Likewise, pipe line construction is usually across country where there are no roads at all. With mud in the rainy season, sand in the dry season and cross country work in all seasons, transportation in the oil fields has always been a difficult matter. Trucks which operate so economically on good roads are at a great disadvantage where traction is hard to obtain.

To take care of these conditions, a special traction tread, known as "Truk-Trak," has been developed and is being placed on the market by the Sivyer Steel Casting Company, Milwaukee, Wisconsin. The "Truk-Trak," to a modified degree, gives tank type traction to the ordinary motor truck. A cast steel track is mounted over the driving wheel and about a pair of idlers in the front. Tension is maintained by an intermediate idler running against the tire. The power is delivered from the driving wheels by the tires directly to the track. When not in use the idler is swung up under the body and the track is wound on reels either at the rear of the driving wheels or ahead of the idlers. The tracks can be attached or removed in from 10 to 20 minutes. Special attaching chains are provided so that the tracks can be applied even after the truck has become stalled. The device is well built with alloy electric steel castings throughout and the idlers are mounted on high grade roller bearings.

"Truk-Trak" is adaptable to any truck without alterations to the chassis and is furnished in sizes to fit any of the standard tires, 7-inch or larger, either solid or pneumatic.



1. *Gas Container* 2. *American Spiral Pipe Works* 3. *Traveling Crane* 4. *Coal Pulverizer*

Rust-Proofing with Lead at a Cost of $3.22 per 1,000 Square Feet

Send for your copy of "Fighting Rust with Sublimed Blue Lead"

SUBLIMED Blue Lead in Oil has been rust-proofing the plant of the American Spiral Pipe Works at Chicago for the past fourteen years. By its use this company is getting the undisputed value of a basic lead pigment for rust-inhibitive painting at a total material cost of $3.22 per thousand square feet of coverage.

Exposed to many different conditions, indoors and out, to excessive heat and corrosive gases as well as to the corroding action of the elements, Sublimed Blue Lead in Oil has successfully met every requirement for a rust-inhibitive paint at this plant.

As well, the head painter states that Sublimed Blue Lead in Oil flows from the brush so smoothly and spreads so easily over the metal surface that his painters can cover a greater area in a day, and still produce a paint film that is free from brush marks, breaks, runs, or alligatoring.

One hundred pounds of Sublimed Blue Lead in Oil will rust-proof 5216 square feet of iron or steel of average smoothness. This is equivalent to a surface a foot wide and nearly a mile long. It is practically double the performance of the pigment most used for rust-inhibitive painting.

Have you ever figured your cost of protecting metal per thousand square feet per year? Users of Sublimed Blue Lead find that theirs are exceptionally low, and that the results have been uniformly good under many different conditions.

Send for your copy of "Fighting Rust with Sublimed Blue Lead"—a Rust-Proofing Manual.

General Offices: The EAGLE-PICHER LEAD COMPANY · 868-208 *So. La Salle St.* · CHICAGO

EAGLE *Picher Sublimed* BLUE LEAD *in* OIL

Sales Offices: CINCINNATI CLEVELAND PITTSBURGH PHILADELPHIA NEW YORK MINNEAPOLIS BUFFALO DETROIT BALTIMORE NEW ORLEANS KANSAS CITY ST. LOUIS JOPLIN

Plants: CINCINNATI NEWARK GALENA, KAS. HENRYETTA, OKLA. PICHER, OKLA EAST ST. LOUIS, ILL. CHICAGO ARGO, ILL. JOPLIN, MO. HILLSBORO, ILL. (2 *Plants*)

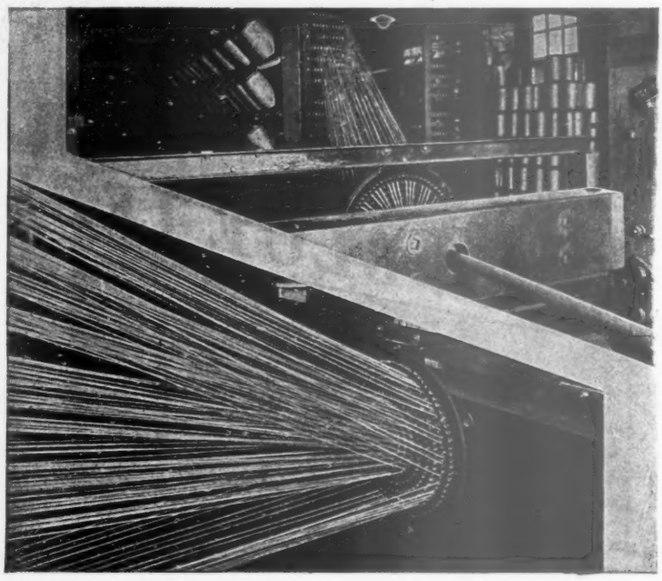
© The E. P. L. Co., 1924

cases. The Standard Oil Co.'s long pending inquiry for 150,000 boxes of tinplate

or two caulking hammers or four backfill tempers.

furnished in sizes to fit any of the standard tires, 4 inch or larger, either solid pneumatic.

"Drill With Manila"



Walk Laid Bull Ropes

The lower illustration is a rear view of yarns passing through the perforated face plate into a steel tube. The upper illustration shows a strand for a rope 10 inches in circumference being formed. The strand is formed while being pulled through the tube by a machine called a "Forming Jack" which travels along a track known as a "Rope Walk." One "Forming Jack" can make as many as six strands at one time.

Wall Bull Ropes Are Walk Laid

They contain no short or tight strands. All three strands are EXACTLY the same length and each takes its right share of the strain. Wall Bull Ropes therefore give service above the average.

WALL ROPE WORKS, INCORPORATED

Oil Field Branch: Bartlesville, Okla.

Stocks throughout the oil fields

EST. 1830 WALL CABLE TRADE MARK

Worthy of Trust

BAKU REPORTS GUSHER IN NEW SAND AND RUSSIA'S BIGGEST GASSER

Following is a translation of the official account sent to the London Oil News by the Asneft of remarkable gusher (or fountain, as such wells are called in Russia) on the former property of Nobel Brothers at Surakhani, in the Baku district.

On May 19 at 3:20 p. m., a great gas fountain well which eventually turned into an oil fountain well, started spouting at Surakhani on Plot III (in the northern part of what was formerly Nobel's eighteenth group). The well is No. 7302/67; and is continues spouting at the present moment.

Well No. 67 is the first well in Surakhani to enter the fifth horizon (oil sand) of the Balakhani series, which had already for a long time attracted the attention of geologists. Until latterly development in Surakhani was carried on from the oil sands of the Surakhani or Sabuntchi series. The Balakhani series, which in the old regions was so prolific of oil, had not yet been explored in Surakhani. Well No. 67, which first exposed the fifth horizon, was started on June 22, 1919, by percussion drilling; and by the time of the nationalization it had been carried to a depth of 1,526 feet, and had a casing of 24 inches. After the nationalization drilling work on this well was continued by percussion until the 16-inch string was landed at a depth of 1,995 feet when the casing between the 26-inch and 10-inch columns were filled in with cement. After that, beginning from March, 1923, the well was further deepened, and by May 11, 1924, a depth of 2,781 feet had been reached. This time the drilling was done by rotary, and by the same rig three American strings of 12-inch, 10-inch, and 8-inch were lowered. The first of these was brought to a depth of 2,594 feet, the second to a depth of 2,725 feet, or lower than the fourth horizon, and the series of sands and clays, where it was feared an inflow of water might be encountered. The third or 8-inch string reached the fifth horizon at a depth of 2,744 feet and penetrated the horizon by 37 feet to 2,781 feet. After the fixing of a cast-iron fountain shield and two steel 10-inch lower bolts, and making all the necessary preparations for trial bailing, this baling was undertaken on May 18 by a baler of 5-inch diameter and 35 feet in lentgh. At first the well began to fill up with a liquid substance, and by the time 23 balers full had been extracted from the well the level of the liquid sank to 301 feet from the surface.

Well Blows In

Next morning, on May 19. when the liquid was at the same level, baling was resumed with a baler of 2½ inches by 21 feet. After extracting another 35 balers of liquid, at 3:20 p. m. gases began to make their appearance and baling set in; and then suddenly a fountain of liquid began to spout, and the well set to "fountaineering" with such tremendous noise and force that it was quite impossible to approach the well with ears unprotected. The gas pressure was so strong (it was said by experts to have been about 100 atmospheres) that all the installation which had been put up to catch the gas, and which had been tested for a pressure of 40 atmospheres, had been blown entirely away and so had all the bolts. Such was the force of this gas fountain.

At once all the necessary measures were adopted to shut in the well. On the fourth day of its flow true crude oil began to make its appearance, gradually increasing in quantity, and on May 27 the fountain threw out not less than 80,000 poods of oil. There was no water to be seen. On May 28 and 29 the output can be put at approximately 100,000 poods. The same results were obtained during May 30 and 31.

Specific Gravity

The specific gravity of the first samples of this naphtha was 0.872 at 15 degrees C., then it fell to 0.867, with a slight variation. In Romany the specific gravity of oil of the fifth horizon is equal to 0.859—0.875.

Until now the production of oil in Surakhani has been from oil sands in the Sabuntchi series, the lower parts of which were considerably flooded. The geologists have been reckoning on finding unexpected productive sands on the fifth horizon; but so far it was quite impossible to foretell the richness of this source. The fountain well No. 67 proves that the wealth of oil in the fifth horizon (or sand) far exceeds all expectations.

The contour of the fifth horizon in the old regions is considerably higher than the contour of the fourth horizon; and if this correlation holds good as regards Surakhani the development of the fifth horizon opens up great perspectives in this region.

Well No. 67 serves as an example of national drilling according to certain plans, when all the necessary measures and precautions had been taken at the very outset of the exploration of the soil. The geologists here worked hand in hand with the drilling department. It is true that owing to research, and the great caution with which the drilling work was carried on, the work itself progressed slowly; but then the results themselves prove the expedience and advisability of such careful test work.

Difficult Drilling

Drilling to the fifth horizon in Surakhani was started in 1920. It was most important first to explore as fully as possible certain characteristic strata, which would then enable one to fix the depth at which the oil stratum under the fifth horizon could be reached. On the old areas under the fifth horizon there are massive layers of water and sand and the distances between the separate layers vary in different regions. This made it all the more difficult to state the exact depth at which the oil stratum could be reached in the fifth horizon; and there was always the fear at hand lest by the least mistake of a few feet the oil-yielding strata should be missed and the well thus destroyed. Careful observations made during the process of the drilling work showed that the thickness of the Sabuntchi strata immediately below the fifth horizon increases but very slightly in Surakhani, as compared with the old areas; in well No. 67 the thickness of the layers of these strata is equal to 959 feet, as compared with 875 feet in the old areas.

The fifth horizon forms an altogether new stratum, since it is divided from the upper horizons by a thick layer of sand and clay. No. 67 well is not situated on the Surakhani anticline. The next well, No. 7533/26, which was drilled to this horizon on Plot V with an 8-inch string to a depth of 2,828 feet, is situated nearer to the axis of the anticline. It is intended to explore the fifth horizon, not at the axis, but at the dips, with the object of ascertaining the disposition of the contour of the oil yielding starta of this horizon.

Great Gas Well at Bibi Eibat

On the Sassipki section of the reclaimed land of Bibi Eibat Bay, Baku district, No. 24 well came in as a gasser on May 13 from the fifth oil horizon, at a depth of 1,080 feet. Casing diameter, 18 inches. Diercter Serebrowsky of the Asneft gave the necessary instructions for precautions against fire. In 3½ hours the well produced an estimated volume of 2,000,000 feet of gas, then sanded up. It is now rigged up and drilling for a regular producer. If the well continues this rate of production it will, so long at that rate lasts, supply all the fuel needs of the Bibi Eibat district.

Conditions at Baku Today

Mention of Director Serebrowsky lends interest to the account of a visit to him at Baku given by Anna Louise Strong in the New York Times.

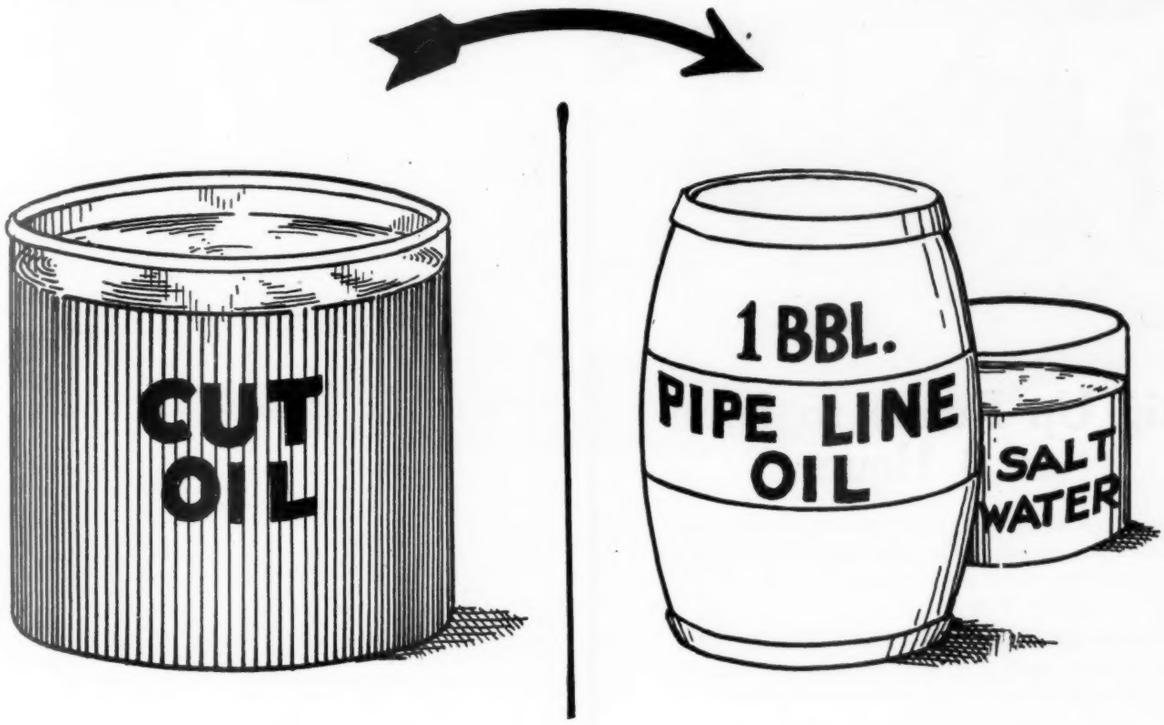
Baku, like all oil fields, is far away

(Continued on Page 74)

© The E. P. L. Co., 1924

Plants: EAST ST. LOUIS, ILL. CHICAGO ARGO, ILL. JOPLIN, MO. HILLSBORO, ILL. (2 Plants)

From This To This



At Nominal Cost

The Most Economical Treating Process

Fresh cut oil is completely separated into pipe line oil and water, by the TRET-O-LITE Process. Cost rarely exceeds a few cents per barrel of recovered oil, regardless of the character of the emulsion treated.

"B. S." and Tank Bottoms are also treated by TRET-O-LITE with complete success, every particle of the oil being recovered.

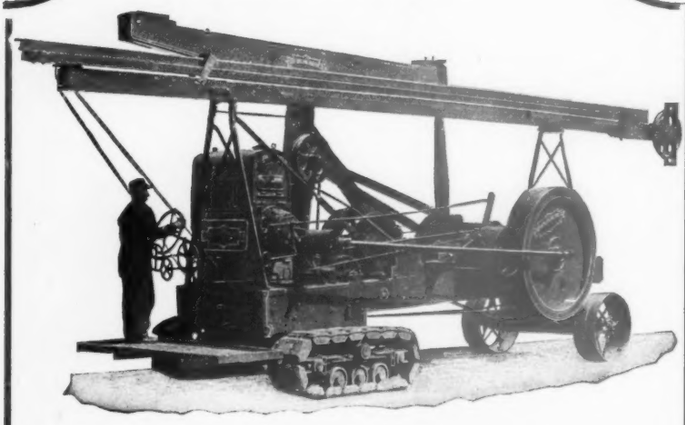
Many producers have told us that they figure treating with TRET-O-LITE costs them "NOTHING." They mean by this that treating processes formerly used left a "B. S." residue, while TRET-O-LITE leaves no "B. S.," and thus recovers enough **additional** oil to pay the total treating expense.

TRET-O-LITE represents a scientifically correct method of treating petroleum emulsions. It is the only method which directly attacks the **cause** of the emulsion,—namely, the emulsifying agent present. The treatment is simple in the extreme. TRET-O-LITE is simply mixed into the emulsion, under suitable conditions. It attacks and neutralizes or destroys the emulsifying agents. Oil and water then separate completely and normally, by gravity.

The process is rapid, thorough, simple, and conducted without special equipment. Installation cost is hardly more than nominal. Write us if you are interested, and your inquiry will be promptly referred to our local field expert who will get in touch with you. Address Wm. S. Barnickel & Company, Webster Groves, St. Louis County, Mo.

141

The new 4 cylinder Star No. 38-ST
Super Tractor Drilling Machine



Rig Up Ready to Spud in 3 Hours

After moving to your location under your own power, you can raise your mast, put up two braces and two guy wires, block up your Star No. 38-ST ready to spud in three hours.

Compare this time with any other type of rig. No rig builders required, no coal or water for a boiler to haul long distances, minimum teaming bills.

15 gallons of gas in the Star No. 38-ST does the work of one ton of coal. No fuel expense when it is not in operation—no steam to be kept up, simply turn off the switch and it stops.

For Cleaning Out and Drilling

The 4 cylinder Star No. 38-ST was designed for cleaning out old wells to a depth of 2500 feet and for shallow drilling. In drilling 1000 feet, it easily handles a string of tools—rope socket, jars, 4½"-x22' stem and a 300 to 500 lb. bit.

It has a range of 20 to 40 H. P. producing a smooth drilling motion.

With ten sq. ft. of gripping traction in its rear wheels, the Star No. 38-ST climbs steep hills, crawls over soggy ground or desert sands under its own power—places no other machine will go. It is almost as easy to control on the road as an automobile.

Oil men who demand quick moving and economical drilling will find this new 4 cylinder Star an ideal machine.

THE STAR DRILLING MACHINE CO.
Akron, Ohio
Branches at Chanute, Kansas; Long Beach, Calif.; Portland, Ore.
Export Office, 2 Rector St., New York City

STRESSING PENNSYLVANIA GRADE TO STABILIZE APPALACHIAN FIELD

By John P. Herrick
Chairman New York State Oil Producers Association
Address before Pennsylvania Grade Crude Oil Association at Pittsburgh, Pa.

Ever since that historic day in August 1859, when Col. E. L. Drake brought in the first commercial oil well in North America on the creek bottom near Titusville, Pa., the world has connected Pennsylvania with high grade crude oil. Today the Appalachian area extends from Allegany County, New York to the Kentucky line, embracing fields in New York, Pennsylvania, western Virginia and eastern Ohio. There are more than 120,000 wells producing Pennsylvania grade crude. The oldest producing well, near Marietta, Ohio, has been pumping for 60 years. Thousands of wells have been producing oil over 40 years and the average of all of the wells in the Appalachian Field exceeds 30 years.

The average daily production of Pennsylvania grade wells is 47,000 bbls., or a fraction over 39-100 of a barrel per well a day. Pennsylvania is credited with 40 per cent, West Virginia 34 per cent, Ohio 19 per cent and New York 7 per cent. Thousands of wells produce less than 4 bbls. a month. Without the gas engine and pumping power these wells would long ago have been gathered in by the junk dealer. Revenue from casinghead gasoline and natural gasoline makes it possible to keep pumping hundreds of wells that would not pay to operate for oil. Air and water pressure have prolonged the life of certain areas through restored pressure to the oil sands.

Owing to the small average production per well the cost of producing Pennsylvania grade crude is high, averaging around $3.45 per barrel. To show a fair profit for the producer this oil must be marketed at a price in excess of $4 per barrel. The tremendous advance in cost of drilling, nitro-glycerin, teaming, lumber and oil well supplies as compared with pre-war years has greatly increased production costs. In 1923 practically every producer in the Appalachian Field had what is known in accounting circles as a red balance. The largest producing company reported a loss of a million dollars.

Ownership of Producing Areas

The Appalachian wells are owned by thousands of individual producers. The largest producing company owns only 8 per cent of the wells. A large majority of the refineries are owned and operated by small corporations, some producing a percentage of the oil run through their stills. There is a community of interest for the prosperity of the producer and refiner is closely linked. The producer furnishes the raw material, the refiner manufacturers it and in some cases serves as distributor.

The investment in oil producing properties in the Appalachian Field exceeds $180,000,000. The investment in refineries exceeds $40,000,000. The investment in pipe lines exceeds $10,000,000. The investment in the natural gas and casinghead gasoline industry exceeds $100,000,000—a total of $330,000,000 for the Appalachian Field. One important by-product is 8,000 bbls. of gasoline recovered daily from natural gas by compression and absorption plants. Once it went in the air. In the Appalachian Field any army of 15,000 men find steady and profitable employment in the various branches of the oil industry. The preservation of this industry is of vital importance to Pennsylvania, New York, West Virginia and Ohio—and to the nation.

Vast Reserves in the Ground

One guess is as good as another but after exhaustive investigation by experts, the United States Geological Survey estimates there still remain in the oil sands of the Appalachian Field as of January 1, 1924, more than 625,000,000 bbls. of recoverable oil. Of this reserve 40 per cent is credited to Pennsylvania, 29 per cent to West Virginia, 16 per cent to eastern Ohio and 15 per cent to New York. From experiments made with compressed air in eastern Ohio and with restored pressure through the introduction of water in the Bradford and Allegany districts, these figures would appear to be low. To save this vast deposit of high grade oil for the world is the problem that confronts the oil producer today for on its solution depends the worth of his investments in producing properties. And in a measure the value of the long string of refineries stretching from Wellsville, N. Y., to Cairo, W. Va. The daily production of the Appalachian Field is a fraction more than 2 per cent of the total oil production of the United States. If it were a low grade oil, much of the territory would have been long ago abandoned.

Saving Big Oil Reserve

Pennsylvania grade is the highest grade oil in the world. From it is manufactured the finest lubricating oil in the world, especially super automobile oils—oils in a class of this own. A year or two ago it occurred to some far seeing refiners and producers that Pennsylvania lubricating oils should be marketed for what they really are, quality oil at a quality price, every gallon to be sold under a trade mark guaranteeing the consumer that it was 100 per cent pure Pennsylvania. Every refiner and distributor to be licensed to use the trade mark. This would mean protection to the producer, refiner, distributor and to the consumer. The price of the finished product to be based on a fair return over cost to the producer, refiner, distributor and a fair price to the consumer based on the highest quality, guaranteed by the label on every container.

Out of this idea was born the Pennsylvania Grade Crude Oil Association organized last year. The organization is made up of oil producers and refiners who contribute 1 per cent per barrel for every barrel of oil produced or refined. This fund to be spent in a national advertising campaign to acquaint the consumer with the superior qualities of lubricants made from pure Pennsylvania crude. Although the advertising campaign has been under way only a short time splendid results are apparent and success of the plan seems assured.

Light Under a Bushel

Eighty per cent of Pennsylvania grade crude is refined within the boundaries of the Appalachian Field by 61 refineries of various capacities. Twenty per cent goes to Eastern seaboard refineries through the trunk pipe lines.

The largest market at present for Pennsylvania oil products is in California more than 2,500 miles from the producing wells. Yet within a circle of 300 miles, of which Pittsburgh is the center, there is consumed every day more gasoline and lubricating oils than are produced in the entire Appalachian Field. The producers and refiners are in a measure to blame for this situation. Too long have they hidden their light under a bushel.

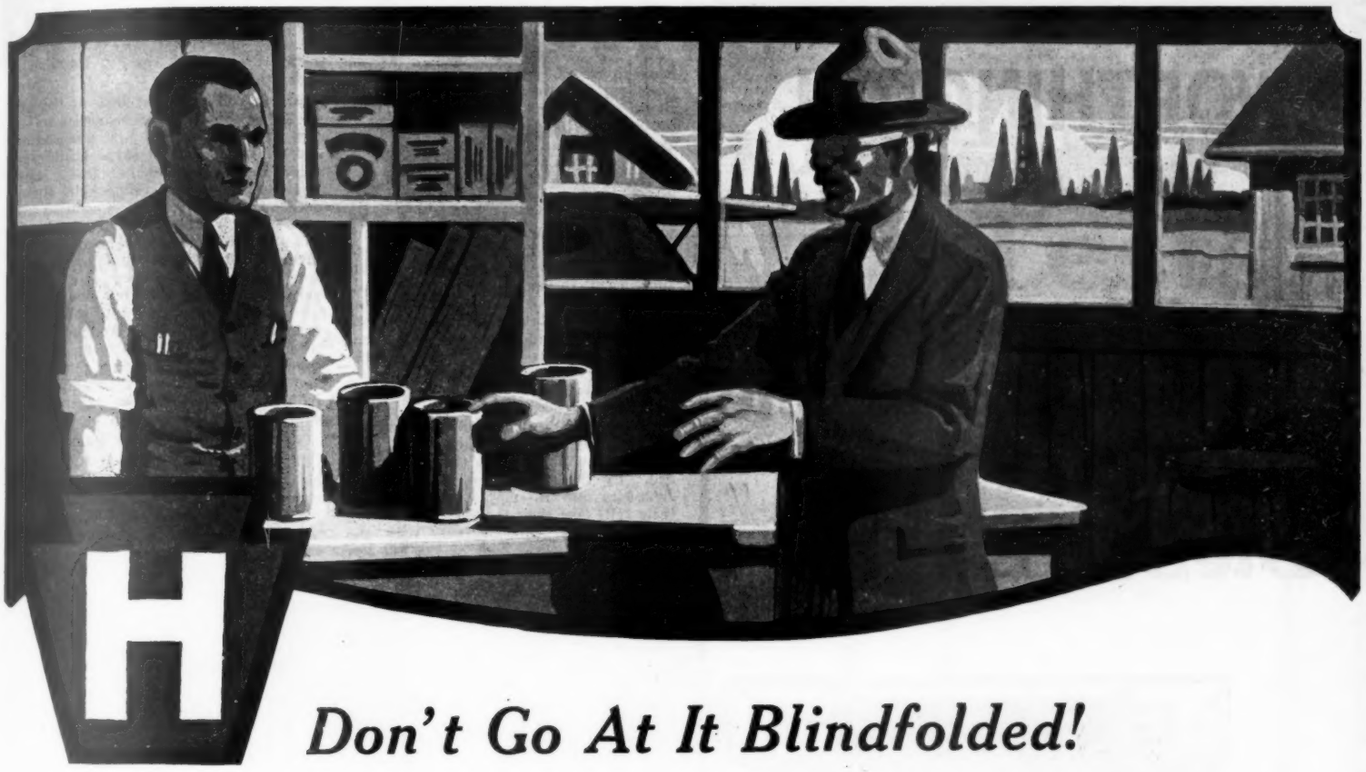
As I see it the solution of the problems of the producers and refiners of the Appalachian oil field can best be solved through cooperation in this national advertising campaign, jointly financed. It is the only solution in sight. It may be wise to increase our investment from 1 to 3 cents a barrel.

It is my earnest conviction that the best investment that every producer and refiner of Pennsylvania grade oil can make is membership in and affiliation with this association.

Means Stabilization of Industry

When the price of Pennsylvania grade crude oil is stabilized as it will be when the products are marketed on a quality basis through national advertising, the vast investment in oil properties, refineries and pipe lines become automatically stabilized. Appalachian oil field prop-

(Continued on Page 80)



Don't Go At It Blindfolded!

You get the same uncertain results from chance couplings and wild-cat claims—maybe they pan out—but more likely they don't.

The cost of sinking a well, these days, makes imperative the use of couplings which guarantee dependable strength and uniform size, from the first stab to the last pull-out.

Just such a coupling is the Harrisburg Forged Seamless Steel Coupling. Not a weld—nor a weakness. No piping to develop leaks—perfect thread and perfect taper—double strength special oil field steel, and uniform *always.*

Don't fish blindfolded for such an important item as couplings. Pick out Harrisburg and you will never change.

Stocked and sold by Leading Supply Houses.

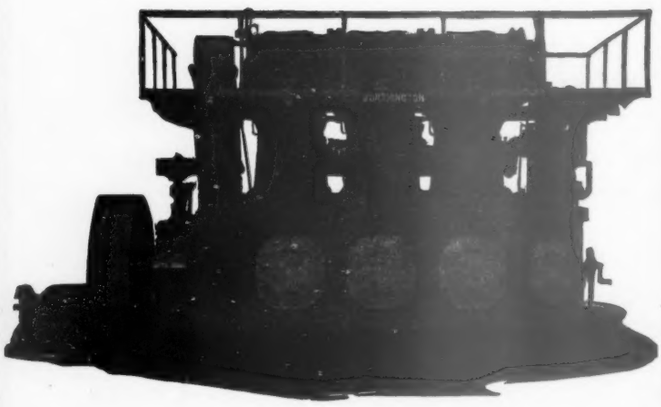
HARRISBURG PIPE & PIPE BENDING CO.
HARRISBURG, PA.
DISTRIBUTORS:
Harrisburg Pipe and Pipe Bending Co. of Texas, Inc., Houston, Texas
Goddard-Thomas Manufacturing Co., Tulsa, Okla.
Superior Tube Co., Tulsa, Okla.

HARRISBURG

Forged Seamless Steel Couplings

WORTHINGTON

The Worthington Vertical Four Cycle Guided Piston Diesel Engine



Single-piece frame, giving greatest strength with minimum weight.
Most complete lubricating system of any engine ever built. Every moving part oiled by force-feed system.
Guided piston with novel scraping device to keep crank case oil clean and prevent piston slap.
Oil cooled pistons—no water can reach crank case oil.
All bearings unusually large. Low bearing pressures.
One outboard bearing carried in main frame.
One lever controls entire engine—start, run and stop.
Inlet and exhaust valves alike and interchangeable.
Any valve can be removed without disturbing other valves or interfering with adjustment.
Starting mechanism interlocked with fuel pump so that starting air and fuel cannot enter power cylinders together.
Gear train for operating cam shaft.
No high pressure joints have gaskets.

WORTHINGTON PUMP AND MACHINERY CORPORATION
Executive Offices: 115 Broadway, New York City
Branch Offices in 24 Large Cities

WORTHINGTON

BAKU REPORTS GUSHER RUSSIA'S BIGGEST GASSER

(Continued from Page 70)

from anywhere. Three and a half days' journey southwest from Moscow I went, across great plains where the late northern snows changed to the early plowing of the Ukraine and then to the arid steppes of the Caucasus, dropping at last to the hot blue of the Caspian Sea, between Europe and Asia. It was the Moscow-Batum express, which goes twice weekly, with comfortable sleeping cars and diner. At 2 in the morning we shrieked our way into the City of Baku and drove through empty street brilliant with electric light. It is the best lighted city in Russia, because of its oil. Here is modern industrialism on a foundation of primitive Asia. Here are workers whose dialects have never been reduced to writing, operating rotary oil drills fresh from America.

On Baku Hill are the ruins of mosques and fortresses built by the Khan who ruled this windy cape a thousand years ago. Up the narrow streets of the ancient city toil Mussulan women, drawing their veils over their faces with one hand, and balancing water buckets with the others. But at the foot of the hill lies the modern city, with the largest power station in Europe, and giant refineries where a hundred streams of oil products pour day and night, winter and summer, never stopping even through war and revolution.

Oil and oil products of all colors: The diamond white of benzine in a score of neighbor streams, differing slightly in heaviness; the many toned machine oils from golden to deep brown; the milky green of soapy oil in the giant vats before it is "washed"; the dull slate color of the washed oil before it is "dried;" the black olive pools and reservoirs of sluggish mazut; and again the deadly quivering whiteness of sulphuric acid that burns through everything living.

Forrests of Derricks

As far as eye can see from the hills of Baku there are oil fields. I drove through them day after day. Forests of black, shining derricks against blue skies or blue water, or in the smoky hollows of the hills. Here is a gusher in Bibi Eibat which has been delivering oil for 7 years at a million barrels a year. Under my feet I hear the rumbling of another gusher hourly expected, announcing its coming a kilometer below the ground.

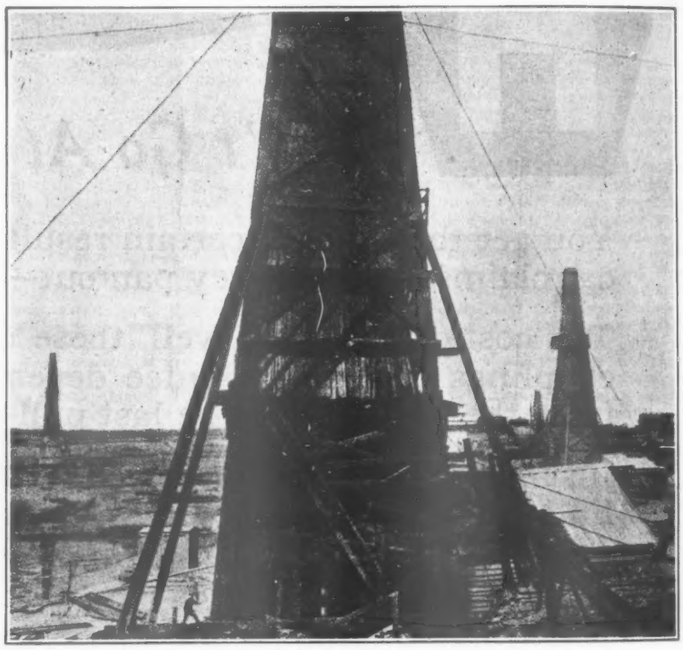
A stolid Tartar, with fez of Persian lamb, stands hour after hour at the bailing of another well, moving monotonously as a machine, letting down the heavy cylindrical bail and moving levers to draw it up, releasing the oil, dropping the bail once more. Twenty-four hours a day this goes on, three shifts relieving each other.

All the oil comes at last to the City of Baku, to the great refineries on the bay. Here are great pipe lines leading out to the docks and ships loading and unloading, great chimneys belching smoke. Here is the largest refinery in Russia, once owned by Nobel, and said to have connections with Standard Oil. It handles 1,000,000 bbls. a month and can turn out 80 different kinds of oil products, benzines, kerosenes, machine oils, paraffines. It is working now for the Soviet Government at 100 per cent of pre-war production. And scattered through the oil city are many other smaller refineries, drawing their mazut and sulphuric acid from the big mother refineries and turning out expensive machine oils by the hundred barrels daily.

The Oil King of Baku

The Oil King of Baku is Serebrovsky. It is he who brought order out of the chaos left by war and revolution. He reorganized the wrecks of 140 odd private companies into one great State company known as Azerbaijan Naphtha, or Azenepth. He has doubled the oil production from its ruinous low point of 1920, when it seemed as if the fields would be permanently lost to the world under the waters of the Caspain flooding underground into the wells. Even the scores of engineers who once held high positions in little companies and are now subordinates under Serebrovsky, told me with admiration that it was he whose tireless genius brought about order. "Only he is killing himself," they added. "He will not last very long."

He knows the fields well by well; he hears when each gusher arrives. Under him has been worked out the definite engineering program which will restore the fields to pre-war conditions by 1926 and will then go on to surpass pre-war. It has been fulfilled in every detail; for more than three years. One hundred and fifty-seven new wells were being dug when I was in Baku. He has bought already more than $2,000,000 worth of new machinery in America; he has brought in great boilers for the power house from England. New warehouses, new workmen's dwellings were all going up when I visited Baku. And even a new field, the Bibi Eibat Bay, has been shut in by a breakwater from the Caspian and added to the old field of Bibi Eibat, and is already bearing derricks and drills.



Russia's New Gusher at Surakhani

Note Results of These High Pressure Tests

TEST NO. 1

300-lb. Valve Blew Up at 1,950 lbs.

Working pressure cast on body of valve: 300 lbs.

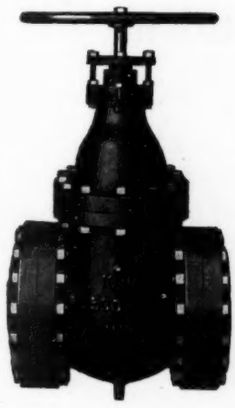
Leaked at 1,900 lbs.

Blew up at 1,950 lbs.

Made on Westcott Valves Picked at Random From Stock

TEST NO. 2

500-lb. Valve Leaked at 2,625 lbs.



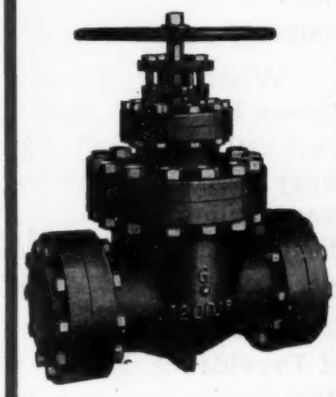
Working pressure cast on body of valve: 500 lbs.

Leaked at 2,625 lbs.

Unable to blow up this valve at 3,000 lbs.

TEST NO. 3

1,200-lb. Valve Leaked at 4,000 lbs.



Working pressure cast on body of valve: 1,200 lbs.

Leaked at 4,000 lbs.

No breakage at 4,300 lbs.

WESTCOTT Valves should not be used at higher pressures than those cast on bodies of valves, but these tests on stock valves will impress our customers with the fact that we are using a very high factor of safety. We are giving oil and gas men the very best valve obtainable.

WESTCOTT VALVE COMPANY, INC.
Seneca Falls, N. Y.

Continental Supply Co., Stores all fields — **H. P. Westcott & Co., Los Angeles, Cal.** — **Continental Well Supply Co., Export—2 Rector St., New York**

106

WESTCOTT

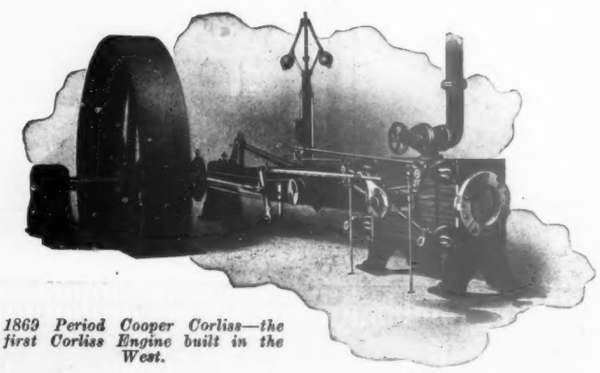
COOPER

"Then Make It Beautiful to the Eye"

We younger men always refer to him as Jim's father—Jim being the quiet, capable consulting engineer at the Cooper plant today.

When the Monitor—that steel coated cheese box on a raft—started shooting the steel rail armor off the Merrimac on that foggy morning back in 1862, Jim's father was sitting on a draftsman's stool helping design the armor coated gun-boats which were to break the Mississippi river blockade.

In 1868 he left the Geo. H. Corliss Co., of Providence, Rhode Island, to design the first Corliss engine west of the Alleghenies for the C. & G. Cooper Co. By 1886 there was such a demand for this type of engine that the Cooper Co. decided to specialize on Corliss engines. No higher tribute can be paid Mr. Debes' ability as a designer than to tell you that the third Cooper Corliss engine, built in 1886, is still in operation.



1869 Period Cooper Corliss—the first Corliss Engine built in the West.

Jed Montis, who started as a messenger boy in the Cooper drafting room, says, "We all had the greatest respect for him." He then proceeds to tell how Mr. Debes, after cautioning a draftsman to make a part plenty strong, always ended his instructions with, "And then remember to make it beautiful to the eye."

In our eagerness to build the most reliable gas engine, we have not forgotten to design it so that a station operator is always proud to show a Cooper engine. This pride on the part of the operators is one of the reasons why Cooper gas engines cost less to operate.

ENGINES

Five 485 B. H. P. Cooper gas engines direct driving Cooper compressors in Ohio Fuel Gas Co.'s York Station near Medina, Ohio.

And the Floor Was as Clean as a China Plate

We inspected this plant with a United Fuel Gas Co. representative on the coldest day last winter. The thermometer registered below zero all day, yet the station operators were working comfortably without coats. The plant is heated by two vertical exhaust heat boilers. Each boiler utilizes the exhaust heat from but one engine.

Everything is kept spotlessly clean and the polished parts are kept glistening. When we ask Mr. Laumer, the station chief, if the boys didn't object to keeping the plant so clean, he replied, "Why they all know it means less work in the end and they take just as much pride in keeping it this way as I do." This is typical of operators in Cooper equipped plants. Cooper engines are so well built that they require little attention, yet they call forth all the latent pride there is in an operator and challenge him to keep the station and surroundings as clean and beautiful as the engines themselves.

THE C. & G. COOPER CO.
MT. VERNON, OHIO

HOPE Built

A combination of low installation and operating costsandgoodperformance, is the reason for the second installation within a year of duplicate 160 H. P. Reeves gas engine compressor units by a large eastern gas company.

Branches Pittsburgh, Penna. Tulsa, Okla. Casper, Wyo.

HOPE ENGINEERING & SUPPLY CO. Mt. Vernon, Ohio, U.S.A.

Consulting and Contracting Engineers in Natural Gas and Oil

COMMITTEE OF CHEMISTS PLANS PROGRAM FOR PETROLEUM RESEARCH

By L. M. Fanning

It is only by laying out a program of work which competent organic chemists can agree upon as being attractive and rational that we can ever convince anybody that petroleum chemistry, using the term in a very broad sense, is worth while.—Dr. Benjamin T. Brooks, before Division of Organic Chemistry, American Chemical Society, September, 1923.

Such a program has been formulated, and a practical plan for carrying out such work has been developed by a committee interested in the general problem.

The work which is contemplated is auxiliary to the work carried on in the industry itself, rather than competitive.

It is understood that the committee which has the matter under consideration represents the petroleum section of the American Chemical Society, a number of manufacturing corporations which have been conspicuously successful in research, several of the most eminent university men in America and also others who know something of the petroleum industry.

It is believed by those who have studied the matter, that easy and obvious things have been done as regards petroleum and that it will be necessary to have the interest and effort of able men over a considerable period to accomplish valuable results.

While it is too early for a definite announcement the plan is for the accomplishment of big things, but it is recognized that they must be done in a big way. Those industries which have profited most from the results of research, carried on in their own laboratories and at their own expense, are loudest and most positive in their emphasis of the value of fundamental research. It is through work of this kind that the really big "strikes" have been made in these industries.

It is learned that the general plan under consideration contemplates doing work of this character, the results of which can then be industrially applied by the industry.

Raw Material Little Studied

We have in petroleums an enormous quantity of raw material which has been relatively little studied from a chemical standpoint. Practically all that we do with it now is to burn it, pave our streets with it, lubricate the machines of other industries and make and utilize other relatively minor products used in ways equally mechanical. It is pointed out that these uses will undoubtedly continue to be the principal industrial value of petroleum, at least as long as petroleum is plentiful.

But it is argued that even in its present applications research may do a great deal in enhancing the value of these products. For instance, more has been found out about lubrication in the last five years than during the whole previous history of the business, and at the present time we are evidently on the threshold of much more important discoveries in this direction.

Another example can be pointed out by reference to the type of research work which is not only making possible the prolongation of an adequate domestic supply of motor fuel but, through making possible greater mileage, makes motor fuel intrinsically more valuable. Possibilities inherent in such investigations are exceedingly numerous but from the very nature of the case all such possibilities could not be enumerated. It is comparable to the exploration of a continent whose shore lines only are known.

Those working on the committee hope to be able to announce the full plan at as early a date as possible, and the progress of such work as is proposed will be watched with a great deal of interest.

In connection with research work of the character planned, it is interesting to quote further from Dr. Brooks' views as expressed before the Division of Organic Chemistry.

Need Rational Program

"In their efforts to impress upon the layman the importance of chemistry to industry," he said, "popular writers have sometimes referred to the petroleum industry as a chemical industry, and have stated, always in a very vague way, that petroleum is similar to coal tar, and that by chemical research it is capable of yielding a wealth and variety of substances comparable to the number and commercial importance of the coal tar derivatives.

"There are several reasons for objecting to this kind of careless writing, first of all because it savors so much of blue sky promoting that the interest which the business principals in this industry are taking in petroleum research is liable to be dispelled, and also because it contributes nothing and arouses no interest among scientific men who can also see through such transparent stuff. The explanation of such fanciful writing is either that these propagandists, like religious reformers, must go too far in their zeal in order that others should go far enough, or that they shirk the task of carefully examing into the facts. As organic chemists we should be gifted with a fair amount of imagination, but we should also have a wholesome regard for the truth.

"In the light of our present chemical knowledge of petroleums and the types of hydrocarbons which are probably contained in such oils, it ought to be possible for organic chemists to indicate what can, within reason, be done chemically with new raw material and along what lines of research should be undertaken to achieve these ends. Even this is a task of no small magnitude, at least for an individual, and it is to be hoped that in view of the enormous spread and number of subjects for research others will contribute freely to this theme. It is only by laying out a program of work which competent organic chemists can agree upon as being attractive and rational that we can ever convince anybody that petroleum chemistry, using the term in a very broad sense, is worth while.

Effort in Right Direction

"It is a fair question to ask why, since we have had this great quantity of raw material confronting us for about 60 years, such chemical research and industrial development along chemical lines has never been carried out. It has been suggested that we need a second Adolph Baeyer, or, in other words, that it has been for lack of brains that this development has not taken place—a rather grave charge against American organic chemists. Such statements were frequently heard during the early days of the rerival of the American dye industry, and in 1914 certain importers told us that we could not produce pharmaceutical white paraffn oil like the Russian product because we did not have the technical skill, and also did not have the proper raw material. The results indicate that we have an abundance of both. In many other situations, as in this case, the only question is one of interest and effort in the right direction.

"However, one might gain such an impression by considering only the results achieved thus far, as regards both academic research relating to nonbenzenoid hydrocarbons and chemical work within the industry itself. It ought to act as a challenge and spur to our efforts to to take a brief glance at the position from which we start. Billions of dollars have been invested in the petroleum industry and it is highly organized. It owes its present strength and magnitude to skilful business management plus good engineering, and probably no great industry is less indebted to chemistry. In its whole history chemical contributions have been rare, and the report submitted by Professor Silliman in 1856 stands out as a monument. Of course, there have been other contributions of a chemical character, but the "refining" department of the industry has been built upon the art of fractional distillation. Other major operations of the refineries are also essentially

(Continued on Page 82)

for 30 years the Seal of Satisfaction on Tanks and Refineries

THE WARREN CITY TANK & BOILER CO.
WARREN, OHIO.

"In their efforts to impress upon the

(Continued on Page 82)

1186 Barrels an Hour

Against

300 Lbs. Line Pressure

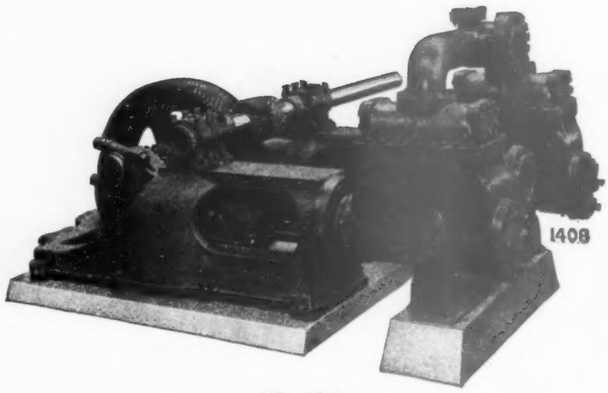


Fig. 1408

10x18" Heavy ATLANTIC TYPE Power Pump, 12" suction and 10" discharge connections. Cast Iron Fluid Cylinders, Liners and Pistons, 5" Brass Valves and Seats.

For twenty years, a popular type of pump in refining and pipe line work for medium pressure work. Solidly built with generous bearings and shafts, and broad faced, quiet running herringbone gears.

Let us send you prints and description

National Transit Pump & Machine Co.

Oil City, - - - Pa.

District Offices: New York Philadelphia Pittsburgh Cleveland Tulsa Denver Houston

GROSS PRODUCTION IN MAY IN THREE MID-CONTINENT DIVISIONS

The production of the Oklahoma fields for May averaged 459,103 bbls. as against 449,408 bbls. in April, a gain of 9,695 bbls. over April's average and the highest average in any month since July 1923, when it was 492,264 bbls. from which it dropped steadily month by month until it reached 394,589 bbls. in December. Each month this year has seen a gain, the daily average in January having been 397,263 bbls.; February 421,953 bbls.; March 431,221 bbls., and April 449,408 bbls. The average for June will be considerably higher than that of May but the exact figures from the more than 57,000 wells will not be available until later in the month.

The production of Kansas was surprisingly large in May. The average for the month was 80,010 bbls. as against 75,618 bbls. for April. This is the biggest average the State has shown since June 1923, when it was 93,261 bbls. a day.

The North and Central Texas fields yielded an average of 264,483 bbls. in May as against 277,855 bbls. a day in April. The falling off in Powell was largely responsible for the drop in May.

Following are the figures for the three divisions:

OKLAHOMA

Average Daily Production in May 1924		
County—		
Washington	7,214	7,214
Nowata-Rogers	6,192	6,192
Osage-Kay—		
Burbank	87,024	
Other Osage fields	54,049	141,073
Tulsa—		
Bird Creek, Owasso, etc.	4,792	
Bruner, Red Fork, Turkey Mountain, etc.	3,275	
Bixby, Leonard and Jenks	2,193	
Broken Arrow	640	10,900
Okmulgee—		
Mounds, Beggs, Hamilton Switch, Youngstown	11,093	
Bald Hill	2,283	
Okmulgee and Morris	3,266	
Henryetta, Schulter, Tiger Flats	2,663	19,305
Muskogee and Wagoner	2,612	2,612
Okfuskee, Hughes and Seminole—		
Wewoka	7,923	
Cromwell	16,570	
Deaner and Lyons	5,310	
Okemah	602	
Wetumka (Twp. 9-9)	2,216	
Weleetka	200	32,821
Lincoln—		
Stroud	16,456	16,456
Creek—		
Cushing and Shamrock	24,716	
Glen Pool, Sapulpa and Kiefer	9,906	
Bristow, Kelleyville and Depew	43,411	
Eastern Bristow	7,162	85,195
Pawnee—		
Cleveland and Keystone	4,244	
Jennings	3,307	
Otoe-Watchorn	1,616	9,167
Payne—		
Yale, Quay and Ingalls	5,418	
March Pool (N. Cushing)	1,189	6,607
Kay-Noble—		
Tonkawa	35,211	
Blackwell and Deer Creek	2,772	
Mervine	588	
Sounth Ponca	1,008	
Billings	593	40,172
Garfield—		
Garber	5,222	5,222
Carter—		
Healdton	16,710	
Hewitt	20,727	
Fox	3,119	
Graham	15,786	
Brock	947	
Milroy	511	
Tussy	120	57,479
Stephens-Cotton—		
Duncan	8,062	
Walters	1,136	
Comanche	1,063	
Kilgore	196	
Loco	2,038	12,495
Caddo County—		
Cement	1,962	1,962
Garvin County—		
Robberson	3,688	3,688
Beckham—		
Sayre	353	353
Pontotoc—		
Allen	190	190
Total Oklahoma		459,103

KANSAS

Average Daily Production in May 1924		
County—		
Marion—		
Florence	2,238	
Peabody	5,761	
Covert Sellers	1,222	7,221
Butler—		
Elbing	4,275	
Potwin	623	
Towanda	3,711	
El Dorado	6,914	
North Augusta	1,289	
South Augusta	2,243	
Cameron-Robinson	786	
Sluss	523	
Nuttle-Koogler	1,776	
Smock	1,088	
Fox-Bush	4,130	
Wilson-Dunkle	2,161	
Douglass	176	
Blankenship	1,339	31,036
Greenwood-Woodson—		
Sallyards	1,815	
Teeter	1,060	
Polhamus	3,866	
Virgil	6,140	
Seely	5,706	
Burkett-Thrall	7,178	
Miscellaneous	160	35,921
Other Counties—		
Cowley	4,660	
Harvey	90	
Rice	95	
Russell	277	
Chautauqua	2,578	
Montgomery	2,002	
Elk	532	
Wilson	243	
Allen	981	
Neosho	834	
Lyon	64	
Miami	610	
Franklin	645	
Bourbon	120	
Linn	377	
Anderson	1,631	
Labette	91	15,830
Total Kansas		80,010

NORTH AND EAST CENTRAL TEXAS

Average Daily Production in May 1924		
North Texas*		
Wichita County—		
Burkburnett	20,019	
Electra	20,711	
Iowa Park-K. M. A.	3,891	44,621
Archer County—		
Holliday, etc.	33,851	33,851
Clay County—		
Petrolia	269	269
Total		78,741
Central Texas		
Stephens County—		
Breckenridge	12,426	
Caddo	6,460	
Clear Fork	7,485	
Gunsight	91	26,462
Eastland County—		
Ranger-Eastland	8,325	
Desdemona	3,175	
Rising Star	98	11,598
Comanche County—		
Sipe Springs	220	220
Brown-Eastland-Callahan Counties—		
Pioneer	2,263	2,263
Miscellaneous pools	6,695	6,695
Total		47,238
Panhandle		
Carson County	1,020	
Hutchinson County	95	
Total		1,115
East Central Texas		
Powell	103,106	
Mexia	30,612	
Currie-Richmond	3,671	137,389
Summary		
North Texas		78,741
Central Texas		47,238
Panhandle		1,115
East Central Texas		137,389
Total		264,483

STRESS PENNSYLVANIA GRADE CRUDE QUALITY

(Continued from Page 72)

erties will then be rated as investments instead of speculations. The producer will be able to put into operation new economies of operation, to secure new capital for expansion, to increase by latest methods the amount of oil recovery per acre, to save the last possible barrel of the highest grade crude oil in the world. The refiner will be justified in adding to his plant the latest cracking process, the most modern equipment for the production of highest grade motor oils, to secure the greatest economy of production in every department. Stabilization will spell permanency throughout the Appalachian oil district and extend the life of the Pennsylvania grade oil fields at least half a century. The distributor will be assured of a steady supply of guaranteed Pennsylvania oil products and the consumer who wants the best, which is the cheapest in the long run, can count on an unfailing supply from year to year, until that far day when the Appalachian oil sands have been drained of their precious store of liquid gold.

TO RENEW TRINIDAD GRANT

General Asphalt Co. receipts of royalty oil are at a rate that warrants, it is reported, unofficial estimates of 750,000 bbls. for the current year. Last year the amount of royalty oil was given as 479,444 bbls. It is expected that arrangements for renewal of the Trinidad Lake asphalt concession for a long term of years will be satisfactorily concluded at an early date. Preparations have been made for utilizing a heavy oil from Venezuela to be brought for fluxing purposes and as a by-product to the Maurer, N. J., plant.

CHESTER STEEL PIPE

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

In the Dodge Syndicate Well, drilled by Lance & Younge at Huntington Beach, Calif., 4165 feet of 8 1-4 inch, 36 pound, 8 thread South Chester Steel Casing was successfully used.

Specializing in Casing

South Chester specializes on Casing for deep well drilling and records prove the value to the oil operator of such specialization.

Steel specially made for the oil country—that's the first factor—steel that resists crystallization to the limit—steel with higher tensile strength and greater elasticity—Chester Casing.

Our Distributors Carry a Complete Range of Stock.

South Chester Tube Company

Chester, Penna.

Also makers of Wrought Iron Casing, 4½" to 12½" sizes.

DISTRIBUTORS:

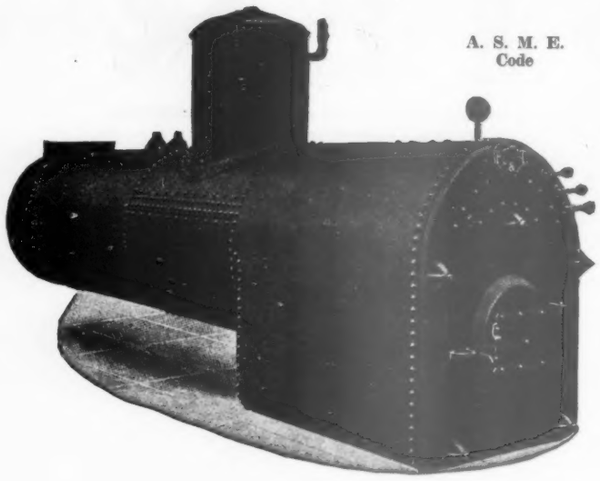
International Supply Co., Tulsa, Denver and Casper

Prichard Supply Co., Mannington, W. Va.

Petroleum Supply Co., Houston, Texas

South Chester Tube Co., District Office, Los Angeles, Calif. Stocks—Thenard, Taft

902



"You Can't Beat Them"

Say the Men Who Run Them

B. V. Dyer and J. W. Pitts, both of Peer-Lorraine Well No. 1, agree with all the rest of the fellows who run

FARRAR & TREFTS
Steam Boilers

"They can't be beat," is their verdict.

It's the men who **run** the boilers who know what they'll do and what they won't do; and it's these men who are most enthusiastic about F & Ts.

They like the roominess of their steam space, their tightness, their strength, their power, the service that goes with them. Your men will also like these features when you use F & Ts.

There is a model of F & T for every oil country need. Each is built to conform to the laws of the state in which it operates. We will gladly send full details on request.

D. F. CONNOLLY AGENCY, Inc.
623-24 Kennedy Bldg., TULSA, OKLA.

Phone Osage 1929 **Night Phone Cedar 2708**

BRODERICK & BASCOM WIRE ROPE
BELTING, H. & A. BULL ROPES

BOILER REPRESENTATIVES
Los Angeles, Calif.—Hillman-Cooney, Inc.
Casper, Wyoming—Northwestern Supply Company
Beaumont, Texas—Brooks Supply Company
Shreveport, Louisiana—Oil City Iron Works, 204 Strand St.
El Dorado, Kansas—El Dorado Machine & Tool Company
Fort Worth, Texas—Longhart Supply Company, 608 First National Bank Bldg.

114

CHEMISTS PLAN FOR PETROLEUM RESEARCH

(Continued form Page 78)

physical in nature, such as the freezing and pressing of paraffin wax, the recovery of condensable vapors from gas, and the brightening of oils by fuller's earth or similar materials.

Testing Not Chemistry

"Also, without taking into account exceptional cases, it is clearly a matter of record that the testing of petroleum products has often been regarded as petroleum chemistry. Many people have apparently confused determinations of flash point, Baume gravity, degrees Engler, degrees Saybolt, etc., with chemical research, and as long as chemists permit such an idea to persist we cannot hope that chemists will influence the industry more than in the past. In the marketing of present-day refinery products these tests are naturally of value, and no useful purpose would be served by repeating here what some petroleum men say about them. The point is that petroleum testing should be called just that and nothing more, and the much wider horizon of scientific research be emphasized. Undoubtedly, one of the reasons why the chemistry of petroleum has remained relatively undeveloped has been the stress laid upon testing and its misconception as petroleum chemistry.

"To those not familiar with the industry a word of explanation is due the petroleum technologist. The industry has been built up on the business of supplying the public with a limited number of products, most of which exist as such in the crudes, and which in the early days when oil of the Pennsylvania type was produced in relatively much greater amounts were not refined chemically at all. Even today some lubricating oils from this crude are not chemically refined. The task of the refiner has been to furnish products of a quality acceptable to the public, and there has been no reason, or any prospects sufficiently tangible and offering hope of more lucrative returns, presented to induce him to do more than this. The various petroleum companies have done a big and fairly profitable business in producing their familiar products, and this is probably another reason why practically no attempts in other directions have been made.

Most Potent Reason

"The most potent reason, however, for lack of chemical development and research within the industry itself is the lack of theoretical, or rather systematic, organic chemistry relating to the nonbenzenoid hydrocarbons. The extent of such work which is needed is so enormous that its cost would be prohibitive to individual concerns. University workers have seldom become interested in such research, probably for a variety of reasons—on account of the impetus given to the chemistry of the benzene series and which still greatly influences all organic chemical research, on account of the reluctance of refiners to discuss even theoretical questions relating to their work with outsiders, the tendency of organic chemists to become interested in something having a puzzling constitutional formula, the difficulty of isolating pure substances from petroleum for investigation, and also, perhaps, the curious drift of chance by which interest seems to be capriciously directed into certain channels and not in others.

"There would appear to be many reasons why independent investigators, such as university men, would select such a field for their research, since with a raw material of such great commercial importance and which is available in such enormous quantities there would be inherent in almost any theoretical research the possibility of discovering something of industrial value.

"There are doubtless other reasons which have obstructed work of this kind, particularly within the industry. Of course, an unknown amount of work of industrial importance has been done and the results have been withheld from publication; it is perhaps too Utopian to hope that results of this particular character should be made public and it is not really necessary that this be done. But there has been a fear that investigation of certain subjects, lubrication for example, might impose new burdens or new requirements on the refiner, and with respect to some such problems some refiners would rather leave things as they are. The discussion, however, should bring out the fact that there is a vast amount of work of a pioneer character to be done which would benefit the entire industry, or rather those units of it which have the proper personnel to take industrial advantage of such investigations."

NEW RODLESS OIL PUMP INVENTED BY CANADIAN

Earl Brock of Petrolia, Ont., has taken out patents in Canada and the United States on a rodless oil pump, which is claimed to be superior to the old style pump and less expensive; and has commenced the Canadian manufacture of his product on a small scale at Petrolia. The old pumps as used in the Petrolia shallow field consist of 1¼-inch pipe and ⅝-inch rods, while the new pump has only one string of ½-inch pipe. It is claimed that there being no rods working up and down will lengthen the life of the pump and decrease the cost of replacement.

The outstanding feature of the pump is the arrangement of the valves and working barrel. A vacuum is caused in the working barrel by the action of the valves, which naturally has a tendency to relieve the veins at the bottom of the well or paraffin or any substance that would stop the flow of oil. The new pump may be pulled at one operation. Six of the pumps are now in operation in the Petrolia Field and it is claimed that they show increased production and decreased cost of operation.

KENTUCKY'S PRODUCTION DURING MONTH OF MAY

By T. S. Scott
Secretary, Kentucky Oil Men's Assn.

Allen	39,387.20
Barren	8,457.01
Bathe	2,137.12
Boyd	86.42
Cumberland	6,631.13
Elliott	534.85
Estill	46,134.56
Floyd	958.79
Hancock	3,266.38
Hopkins	1,147.05
Jackson	156.93
Johnson	102,636.80
Knott	195.02
Lawrence	39,035.18
Lee	201,420.31
Magoffin	96,209.08
McCreary	573.85
Menifee	358.90
Monroe	3,492.72
Morgan	577.85
Ohio	7,524.32
Owsley	600.93
Powell	24,370.28
Simpson	1,612.18
Warren	51,508.51
Wayne	12,361.46
Wolfe	4,702.38

YOUR OLD FRIENDS

You often find yourself thinking or talking about your old-friends whom you knew in Pennsylvania, New York, Ohio or West Virginia.

You wonder if they are in California, Oklahoma, Kansas, Texas, Wyoming, etc. You would like to hear from them.

Your friends read the Classified Section every week, thus giving you a good chance to get in touch with them.

A small advertisement, asking for their whereabouts, etc., would put you in touch with them.

Try to get in touch with them this week.

CORK CHANNEL PACKING

A bulletin from the Witherup Cork Packing Co., Inc., Beaumont, Texas, describes the Witherup cork inserted channel packing, for use in practically every type of pump or engine. It is the invention of C. J. Witherup and is said to work advantageously as packing particularly around plungers in pumps and engines. In the Witherup packing, a strip of the highest grade wood cork is imbedded in a channel of duck or asbestos. It is said to stand up under very nearly every requirement that can be placed upon packing.

When You Want the Details

Now and then a bulletin will satisfy announcing a fact when everybody interested knows exactly what it means. But there are times when news is so unexpected that to be understood the full details are needed.

This was the case with the daily newspaper dispatches announcing that the Attorney General of the United States has filed suit against some 50 oil companies attacking the cracking patents they hold and the agreements under which they are using them.

To the general public all that this meant was that the oil companies were being pilloried again. To many, very many, in the oil business itself the facts and theories behind the litigation were just as unknown. Yet the suit itself was of vital importance to the entire industry of which they are a part.

So The Oil and Gas Journal, as usual, gave them the details lacking in the newspaper reports. It printed the text of Attorney General Stone's presentation of the Government case. It published interviews or statements from leaders in the industry and it printed the case for the cracking patents and the agreements under which they are being used. In addition it gave the history of the patents and the litigation between oil companies which was settled out of court by these mutual agreements which are the basis of the present suit.

Furthermore it editorially expressed the opinion of the oil industry and industry and business generally in regard to the theory upon which the law now being invoked was enacted a generation ago, a theory as out of date as the methods of 1890 before the automobile, the radio and the airplane were thought possible of their present commonplace utility.

This, by the way, is the sort of service to its readers and the petroleum industry that The Oil and Gas Journal is rendering every week. When bulletining a fact is sufficient the fact is told briefly and concisely. When the full details are necessary to a thorough understanding then the full details are assembled and printed.

The patent case is merely the latest example. The production reports from every field are a familiar illustration. The exact and detailed news of the refining and marketing situation in every section is another.

Whenever and wherever there is news of interest to the oil industry The Oil and Gas Journal will get it and give it.

Regular subscribers know this. This page is devoted to telling the occasional or news-stand reader he ought to be a subscriber.

The Oil and Gas Journal ORDER BLANK

Tulsa, Okla.,

You are hereby directed to mail The Oil and Gas Journal to me for_____ year. Enclosed find remittance $____

Classify my interests as checked by me

____Producing ____Refining

____Equipment ____Marketing

Name_____

Address_____

City_____

U. S. or Mexico	
One Year	$6.00
Six Months	3.00
Three Months	2.00
FOREIGN	7.00

Order Now!

It Will Help You

Investigate

LEIDECKER

A String of Leidecker Tools

Temper Screw

Rope Socket

Jars

Stem

Bit

Properly Designed

Quality Materials

Effective in Operation

Give Satisfaction

LEIDECKER

THE LEIDECKER TOOL COMPANY
MARIETTA, OHIO
Bartlesville, Oklahoma **Casper and Basin, Wyoming**

TAR SAND MOUNTAIN IN NORTHERN ALBERTA

CHATHAM, Ont., July 5.—As a result of survey work carried on over a period of 10 years, detail contour maps of the outcrops of bituminous tar sands in northern Alberta covering an area of 1,250 square miles are now available for the public for the first time. The survey was largely under the direction of S. C. Ells of the Department of Mines at Ottawa, who has made a detailed study of the geological aspects of the whole country north of Fort McMurray.

Mr. Ells declares that the value of the tar sands for paving and road work, as well as for industrial purposes has been proven. With development on a large scale to reduce overhead, they could be worked at a good commercial profit. Thousands of samples of the material have been sent to Europe and the United States and extensive tests are now being conducted.

In 1913 Mr. Ells made the first reconnaissance of the area at Fort McMurray. At that time not a single survey line or even base line had been run north of that point. Streams and lakes were still largely unmapped, and a map apart from the Athabaska River was practically a blank sheet. As to the tar sand deposits, no accurate information was available; although some years previous a vague and in many respects misleading statement had been prepared.

For years Mr. Ells and his various associates traversed a most difficult country, practically devoid of trails, to make the necessary surveys and observations of the geological formations. They packed for weeks at a time through swamps and muskeg, or in winter broke trails, hauled toboggans and slept in the open.

"The outstanding feature of the work completed," states Mr. Ells, "consists in the preparation of detail contour maps of an area 1,250 square miles in extent. On this map every principal outcrop is indicated to scale and classified according to its probable commercial value. Hundreds of minor occurrences have been indicated. Trails, all streams and drainage depressions, islands and sand bars have been shown. This work alone has involved the running of nearly 3,000 miles of transit line and more than 20,000 elevations have been established.

"Extensive sampling by means of augers has been done, and more than 120 samples analyzed in the laboratory. A quantity of petroleum has been distilled from the crude sand and subsequently fractioned. These fractions have all been defined and their values determined. The problem of separation has been carefully studied, and data regarding nearly all processes that have been attempted during the past 35 years have been compiled.

"Demonstration pavements have been laid the success of which after nine years under heavy traffic requires no comment. A large mass of statistics has been compiled in order to determine the approximate radius under which the crude sand can be used in competition with imported materials. A number of shipments of tar sands have been prepared and thousands of sacks shipped. Many of these have gone to Europe and the United States where they have been used in connection with various investigations.

"Largely by personal effort, the attention of responsible persons has been drawn to the importance of the deposits, and as a direct result many thousands of dollars are now being spent in investigation of various processes. Industrial applications of the tar sands and separated bitumen have also been considered. Excellent paints and varnishes have been made, it has been found successful as a binder for fuel, and for architectural work a good mastic has been prepared. This is applicable in many ways for roofing, waterproofing, foundations, flooring, etc."

In the earlier days, the tar sand area was hopefully regarded as a good drilling prospect for commercial oil, and a number of shallow tests were put down by various interests. Recent investigations have indicated that the commercial utilization of the tar sands is largely an extraction or reduction process, and to this end numerous experiments have been carried on with various processes.

The only attempt so far to commercialize the deposits has been that of McMurray Asphaltum & Oils, Ltd., headed by Thomas Draper of Petrolia. This company has a plant at Waterways, on the end of steel, and after operating on a more or less commercial scale for a couple of years, preparations have now been completed for shipping large quantities of tar sand. The plant is located at the base of a tar sand cliff more than 200 feet high. This is a solid mountain of tar sand, except for the overburden on the crest, and the entire face of the cliff has been cleared and mining operations are now being conducted at the top. A tramway has been built from the bottom of the cliff nearly to the top. The cars are operated on the gravity system, the loaded car in its descent elevating the empty for its load. On reaching the bottom, the loaded car is run out upon a platform and its contents dumped into wagons pulled under the platform. The loaded wagons are hauled to the railroad siding where a large loading platform has been built, and are there backed on to the flat cars and dumped, the only handling necessary being some shoveling when the cars are about filled. The railroad spur will be continued to the base of the tar sand cliff, when the mineral can be loaded directly into the railroad cars without teaming. Various improvements have been made to the plant this season and new machinery installed, and further extensions are contemplated.

MANAGERS HOLD CONFERENCE

OIL CITY, Pa., July 4.—District managers of the Oil Well Supply Co. held a two days' conference here recently. The following were present: O. J. Brown, vice president; J. F. Hunter, secretary; B. L. Carmen, of Bremen, Ohio, district manager of Ohio; J. J. Durst, of Casper, Wyo., district manager of Wyoming and Montana; J. D. Lemex, of Tulsa, Okla., district manager of Oklahoma; Byron Post, of Tulsa, sales manager of Oklahoma; H. J. Morlang, Fort Worth, district manager of Texas, W. H. Thompson, Fort Worth, sales manager of North Texas; J. M. Post, Shreveport, La., district manager of Louisiana and South Texas; F. L. Weigand, Shreveport, sales manager of Louisiana and South Texas; R. S. Lemon, Parkersburg, W. Va., manager of rig and reel department; H. E. Zeigler, of Bridgeport, Ill., district manager of Illinois; R. H. Christy, of Houston, Tex., sales manager of South Texas; W. B. Glover, general sales manager of Pittsburgh; E. E. Greeve, chief engineer of Pittsburgh; W. W. Anderson, manager export department, of Pittsburgh, and George Hoffman, special sales representative, of Los Angeles, Cal.

Oil City officials present were: E. R. Gnade, general manager of the Imperial Works; J. H. Chickering, J. A. Long, Frank Holmes, A. H. Sutton, R. H. Howes, G. E. Kincaid, J. B. Forker, W. L. Culbertson, Ruel Mohnkern, Joseph Stiller, S. E. Wilder, Alvin Forsblom, F. E. Bayliss, S. B. Roberts and H. H. James, district manager.

RUMANIA SEIZES OIL?

Notwithstanding protests by foreign Governments and foreign oil companies, the Rumanian Senate has passed the mining law under which Rumanians are permitted to acquire control of foreign oil properties. A dispatch from Bucharest recently said the American legation was preparing a second note protesting against the provisions of the proposed Rumanian mining law, which was considered as tending toward confiscation. The dispatch added the British Government had lodged a protest and that the French, Belgian and Dutch Governments were preparing to do likewise.

MAGNOLIA PETROLEUM COMPANY

Refiners and Marketers of High Grade
PETROLEUM PRODUCTS

Magnolene
REG. U.S. PAT. OFFICE

THE DEPENDABLE LUBRICANT

Lubricating Oils and Greases

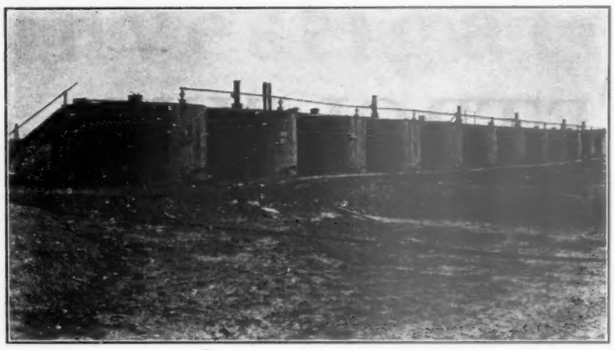
"A Grade for Each Condition"

GENERAL OFFICE

DALLAS, TEXAS

DIVISION SALES OFFICES:

DALLAS HOUSTON FORT WORTH SAN ANTONIO OKLAHOMA CITY LITTLE ROCK EL PASO AMARILLO



Points of Excellence

There is no such thing as "Just as Good."

Each different make of tank have certain outstanding features which other tanks do not possess.

Five main points are present in any tank—Material, Paint, Fabrication, Construction and Erection. We use Armco Ingot Iron which has proven the longest lasting and most workable material for tanks. Our paint absolutely resists salt water and gasoline. The fabrication is exact due to modern machinery. Our construction is the strongest type of any bolted tank. The erection of our tank is very fast, and is tight when erected.

Bolted and Welded Tanks

GANTZ TANK Company

SAPULPA, OKLA.

Contracts Awarded For More Buildings For Oil Exposition

Contracts have been signed for the construction of three steel buildings and 59 arcades to be erected at the grounds of the International Petroleum Exposition in Tulsa for use of the Exposition and Congress October 2-11. These will be used to augment the seven brick buildings that are already built. An important change in building arrangement was made this week when the West Virginia Building, hitherto reserved for the scientific and technical exhibits, was thrown open to general exhibitors owing to the great demand for space, and the plans for this structure were revised to give more space within the building. A new scientific and technical building will then be built adjoining the New York Building.

The arcades fall into three groups, facing Oklahoma, Illinois and Indiana avenues. The open space on the grounds covers about two acres, and is divided among 40 exhibitors, in lots varying from 200 square feet to 3,300 square feet.

The new buildings are to be completed by September 1, so that the exhibitors can begin installing their equipment fully a month before the opening of the Exposition. As an indication of the length of time taken to place some of the heaviest exhibits, one manufacturer began this week to prepare the foundations for a large engine which he intends to operate.

At the present time, there are 431 booths or space units included in the buildings and arcades. This does not include space reserved for scientific, technical, historical or Governmental exhibits, nor the open space. The largest single contract for space is held by the National Supply Co., amounting to $7,800. Several others have engaged more than $5,000 worth, and the contracts range down to single booths at $250.

Prominent among the exhibits this year will be a large number of electrically driven motors which are gaining popularity in many fields. These will operate side by side with other types run by steam, gas or gasoline, and will give visitors an excellent opportunity to compare their merits.

CENTRAL WEST

(Continued from Page 54)

second test on the Eli Stockwell farm, and in Section 4, W. E. Donnelly is starting No. 3 S. F. Hedgman farm. The outcome of George E. Grant and Sons' No. 2 on the Grant farm, Section 1, Henry Township, and a little northwest of Cygnet, will be watched with interest, and should it prove a commercial producer will cause more drilling along the Dixie Highway. In Section 28, Plain Township, and northwest of Portage, Allen Coon and others are drilling No. 5 on the Roe heirs farm.

Indiana Field

Only a few completions are reported from the Indiana fields during the week, as work has been closed down, according to advice from the Hotmire Pool, in Pike Township, Jay County, the most active section of the Indiana Field, due to excessive rains. In Bear Creek Township, Jay County, Mesel & Mesel's second well on the D. W. Bergman, Section 21, pumped 25 bbls. and No. 3 is drilling. Their No. 2 on the J. H. Whiteman, Section 10, pumped 5 bbls. and a rig is up for No. 3 same farm.

In Jackson Township, Jay County, Rebecca M. Keith has drilled in a dry hole in a test on the Thomas Bowles farm, Section 1.

Illinois Field

Little development work is under way in Illinois outside of the Martinsville Field of Clark County and the Wabash County Field. In Martinsville Township, Clark County, the Ohio Oil Co.'s No. 12 on the northeast corner of the S. N. Brooman, Section 30, pumped 40 bbls. from the stray sand at 1,410 feet. The Trenton Rock Oil Co.'s No. 13 John S. Carper farm, same section, is reported at 75 bbls. at 1,406 feet, also the stray sand. In Westfield Township, same county, D. M. Watson and others' No. 1 R. C. Wilhoit, Section 19, pumped 10 bbls. of 23.5 gravity oil at a depth of from 471 to 506 feet.

In Robinson Township, Crawford County, the Ohio Oil Co. and McBride's test on the J. C. Wilson No. 2 farm, Section 7, was a dry hole.

In Morgan Township, Coles County, the Silurian Oil Co.'s No. 1 J. W. Craig, Section 18, drilled to a depth of 1,263 feet, proved a duster. In Hutton Township, same county, Colegrove, Hoey and others are drililng No. 16 on the J. Foreman farm, Section 7, west of the town of Westfiield.

In Petty Township, Lawrence County, the Ohio Oil Co. abandoned its Nos. 1, 2, 3 and 14 Oscar Smith farm, Section 20, and Nos. 4, 6, 31 and 43 S. E. F. Cogal, Section 19. In Bridgeport Township, the Snowden-McSweeney Co. is drilling No. 41 C. B. O'Donnell, Section 17.

In Centralia Townhsip, Marion County, the Petro Oil and Gas Co. has a rig in for No. 12 John Kinsey, Section 30.

In Waterloo Township, Monroe County, the Ohio Oil Co. brought in a 35-bbl. producer in No. 8 on the Henry Kolmer, Section 2, at a depth of from 437 to 467 feet. This is the largest producer found in the field for a couple of years.

SOUTH AMERICA SHOWS ACTIVITY

That drilling activity is on the increase in South America is illustrated by this picture of a portion of a shipment of 32 Titusville Acme 75 horsepower, 150-pound working pressure, A. S. M. E. code oil country boilers, which has just been made by the Continental Supply Company for a South American port. The boilers are shown being delivered to a steamer by lighters in the port of New York.

What the Blue Triangle Means to the Oil or Gas Man

ARMCO-Ingot Iron is Used for:

- Tanks
- Wagon Tanks
- Roofing
- Siding
- Barrels
- Culverts
- Flumes
- Fence Wire
- Lath
- Brine Lines
- Vapor Lines
- Run-out Lines
- Agitators
- Cooling Towers
- Evaporators
- Heat Exchangers
- Boiler Tubes
- Stills
- Tubing

ARMCO-Ingot Iron, the **iron** that bears the **blue** triangle, resists the attack of salt water on the bottom of tanks. It holds off corrosion caused by distillates. Outside it withstands the attack of rust, caused by contact with moisture and air.

Striking proof of the lasting qualities of ARMCO-Ingot Iron is this: The National Refining Co., Coffeyville, Kansas, used both ARMCO-Ingot Iron pipe and steel pipe in the same condenser box. Within the first year the steel had to be replaced, but the ARMCO-Ingot Iron pipe was still in serviceable condition after seven years.

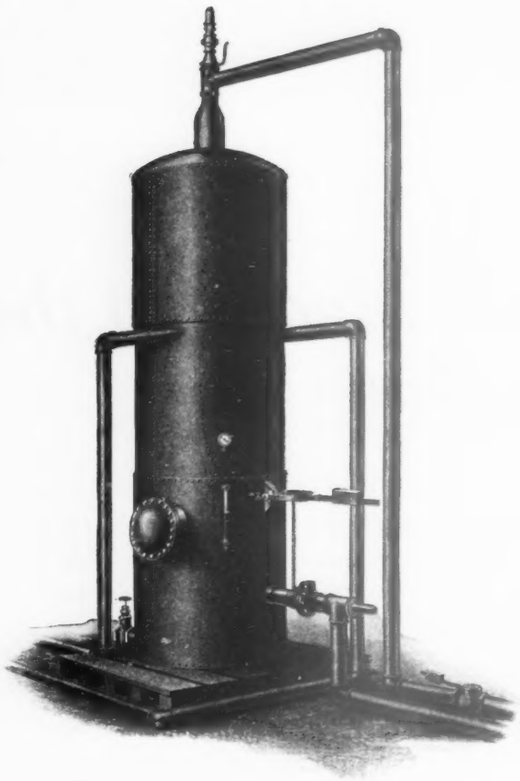
Ask for a copy of:
"The Story of Commercially Pure Iron"
It's a booklet worth reading, and we shall be glad to send it.

ARMCO INGOT IRON

The American Rolling Mill Company, Middletown, Ohio, U. S. A.

The Armco International Corporation, Cable Address—ARMCO, Middletown, Ohio

Trumble Gas Traps are Found Wherever Oil and Gas Is Found



For many years Trumble Oil and Gas Separators have been used all over the world and a saving of both oil and gas has been effected by their use. A saving of oil is effected by holding the lighter constituents in the oil while the separation is taking place, under pressure. The gas when separated from the oil is confined to pipe lines where it may be carried to any place where it may be desired.

Oil and gas conservation is an important item in the operating fields today and may be the difference between profit and loss in operating a small field.

Trumble Gas Trap Company

804 Higgins Building **William C. Rae**
LOS ANGELES, CAL. **SALES MANAGER**

Eastern Representative:

C. F. CAMP

14 East Seventh Street (P. O. Box 289)

TULSA, OKLAHOMA

MID-CONTINENT REFINERY RUNS INCREASE 4 PER CENT OVER JUNE

By C. O. Willson

Mid-Continent refineries on July 1 were running 13,885 bbls. daily more crude oil to stills than on June 1, according to the monthly check of refinery runs. This increase as shown in Table 2 developed despite slight decreases in the runs of Kansas and North Louisiana refineries. Oklahoma plants increased their runs a total of 7,660 bbls. daily with North Central Texas plants showing the largest increase of 8,550 bbls. Arkansas plants had an increase of 225 bbls. daily.

This total increase of approximately 4 per cent is small when it is considered a much larger increase might be expected in the summer months. However, due to the unfavorable refined market that has prevailed for several months, it had been hoped that refiners would curtail rather than increase their runs. As was the case last month, the situation can be explained as partially due to the desire of the independent refiners to reduce their crude stocks in expectation of lower prices. In North Texas the increase can be explained in part as a development from a crude situation in which several plants have been able to secure the whole or part of their crude supplies under the crude prices as posted by a majority of the larger purchasing companies.

Still Operate at Loss

It is generally agreed, however, that crude and refined prices to a great majority of Mid-Continent refiners still mean losses in current operations so increases in runs to stills cannot be explained as development of profitable operation. It will be noted in Table 3 that despite the unfavorable market situation refiners are running 39,555 bbls. more of crude to their stills than they were on July 1 of last year. The largest increase over last year was in North Central Texas with all areas showing at least a small increase. The heavier crude runs developed although eight less plants are operating. The increase comes mainly from the enlarged operations of the major plants whose increases have more than offset the shut downs and curtailed runs of the smaller plants.

Oklahoma

In Oklahoma, the operations of Cosden & Co. more than account for the total increase in the State. On June 1 the company was only running 10,000 bbls. daily. This was immediately increased, however, and it is understood that the company's plant at West Tulsa averaged around 25,000 bbls. daily for the month of June.

The increase in runs is understood to have been a development of an enlarged demand from customers with marginal contracts covering gasoline purchases. It is expected that the company will continue to run between 25,000 and 30,000 bbls. daily over July. There was little change in other major plants of the State. The Marland Refining Co. is running 10,500 bbls. daily at its Ponca City plant and the plant of the Champlin Refining Co. has been lowered from 9,500 to 8,000 bbls. daily. The Imperial Refining Co. has reduced its runs from 5,000 to 3,750 bbls. daily at Ardmore. The most important reduction within the State came from the shut down of the Sand Springs plant of Chestnut & Smith Corp. of Tulsa. The plant will not be operated again according to an announcement of officials until market conditions improve. This plant was started up last spring after having been shut down for over two years.

North Central Texas

The 8,550-bbl. daily increase in North Central Texas is a development both of greater runs to stills at plants already operating and also the fact that three plants which were shut down on June 1 have resumed operations. As previously explained, several plants in the Wichita Falls area have been able to secure crude supplies approximately 50 cents under the posted prices of most of the larger purchasers. The plants of the Primrose Refining Co. at Wichita Falls and that of the Petroleum Corp. of Electra are operating again after having been closed down in May. The small skimming plant of the Mexia Oil & Refining Co. at Mexia is also operating.

Among the increases in the plants already operating were Rulf Refining Co., Fort Worth from 5,200 to 6,200 bbls.; Iowa Park Producing & Refining Co., Iowa Park, 800 to 1,500 bbls.; Miller Petroleum Co., 2,500 from 1,000 bbls., and Panhandle Refining Co., from 1,500 to 3,500 bbls. The Texhoma Oil & Refining Co. has also made a substantial increase in its runs. The Magnolia Petroleum Co. has reduced the runs of its Corsicana plant from 5.000 to 3,000 bbls. The Clayton Oil & Refining Co., Dallas, is also among the larger companies which have reduced their runs.

Kansas

The most important development of the past month in the Kansas operations was the shut down of the Wichita plant of the Sterling Oil & Refining Co. This company is in the hands of a Federal receiver and the shut down is for an indefinite period. The Kansas Oil Refining Co. has resumed operations at its Coffeyville plant after making some changes in management. The Sinclair Refining Co. has reduced its runs at its Coffeyville and Argentine plants so that it is now running 8,800 bbls. daily instead of 10,700 bbls. as of June 1. The White Eagle Oil & Refining Co. at Augusta has increased its runs from 4,800 to 5,750 bbls. The Roxana Petroleum Corp. has also increased its runs at the Arkansas City plant so that it is now handling nearly 10,000 bbls. of crude daily. There were only minor changes in other plants.

Arkansas-North Louisiana

There were no important changes in the operations of Arkansas plants. The only changes in the North Louisiana plants was a 1,000-bbl. daily reduction in the topping plant of The Texas Co. at Ardis and a 200-bbl. daily decrease in the lub plant of the Louisiana Oil Corp. at Bossier.

TABLE NO. 1

Based on plants which have been in operation during the past year.

	No. of Plants	Capacity	Plants Op. July 1, '24	Dy. Runs July 1, '24
Oklahoma	67	271,400	50	152,625
North Central Texas	47	165,750	36	84,050
*Kansas	33	132,200	20	66,800
North Louisiana	7	33,500	6	24,800
Arkansas	16	42,250	8	13,975
Totals	170	645,100	120	344,250

*Includes four Missouri plants.

TABLE NO. 2

Based on operations of all plants as of July 1, 1924, and June 1, 1924. (Capacities includes all plants regardless of how long they have been shut down).

	Plants Op. July 1, 1924		Dy. Runs July 1, 1924		Pl'nts Op. June 1, 1924		Dy.Runs June 1, 1924		Dy. Inc. July 1, 1924
	No. of Plants	Capacities			No. of Plants	Capacities			
Oklahoma	103	354,100	50	152,625	103	353,600	51	144,965	7,660
N. Cent. Tex.	73	237,350	36	84,050	73	236,350	35	75,500	8,550
†Kansas	39	138,600	26	66,800	39	138,600	20	70,150	*1,350
N. Louisiana	17	33,500	6	24,800	17	44,530	6	26,000	*1,200
Arkansas	16	41,700	8	13,975	16	42,250	8	13,750	225
Total	248	816,830	130	344,250	248	815,330	118	330,365	13,885

*Decrease. †Includes four Missouri plants.

TABLE NO. 3

Based on operations of all plants as of June 1, 1924, and June 1, 1923.

	No. Plants July 1, '23	Capacity	Plants Op. July 1, '23	Daily Runs July 1, '23	Daily Dec. Com'd to July 1, '24
Oklahoma	102	352,100	56	151,315	1,310

KELLY KATS
TRADE MARK REG.
THE TIRES WITH NINE LIVES

Reputation Sells Kelly Kats, but service keeps them sold

No doubt the reputation of Kelly Kats influences many a truck owner to buy his first set, but he would not continue to buy them if the service they gave did not measure up to his requirements.

The fact that Kelly Kats almost invariably becomes standard equipment on truck fleets where they are given a trial is the best possible proof of the service they render.

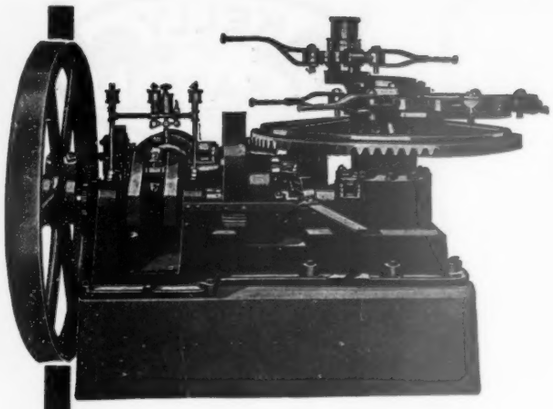
For heavy-duty trucks particularly, Kelly Kats have many advantages. They wear as well as, if not better than, solid tires they cushion the truck much better and get traction without chains on almost any kind or condition of road.

Kelly Kats deliver mileage which saves the truck owner many dollars on his tire bills each year.

There are no Caterpillar tires but Kelly Kats

KELLY-SPRINGFIELD TIRE CO.
250 West 57th Street
New York, N. Y.

The big oil refining companies are large users of Kelly Kats, not only on their tank trucks but also on trucks which operate in the oil fields.



Learn for Yourself About This Power

If you need compact, strong dependable power, you owe it to yourself to investigate this latest Pattin combination.

Pattin 4-cycle Gas Engine geared direct to single eccentric and disc pumping power. Equivalent to double eccentric. Makes possible perfect balancing of wells without swings. For wood or concrete foundation. Perfectly concentrated power, eliminating belts, and doing away with the large power house.

Made in 8 H.P., 12 H.P., 15 H.P., and 20 H.P. sizes.

Write us about this.

THE PATTIN BROS. CO.
Marietta, Ohio

Branch Offices and Warehouses: Tulsa, Okla., Wichita Falls, Texas. Carried in stock by Frick & Lindsay Co. in Kentucky

PATTIN POWER

North Central Texas	60	195,950	31	65,300	18,760
*Kansas	41	117,500	25	63,820	4,980
North Louisiana	20	49,050	6	15,000	9,880
Arkansas	17	22,010	10	9,260	4,715
Total	240	741,610	128	304,695	39,885

*Includes four Missouri plants.

REFINING OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year.)

Name and location—	Capacity	Runs July 1	Runs June 1
Allied Refining Co., Okmulgee	1,800	750	800
Anderson-Prichard, Cyril	1,200	700	650
Barnsdall Refining Co., Barnsdall	3,500	3,800	3,500
Bolene Refining Co., Enid	5,000	4,000	4,000
Cameron Refining Co., Ardmore	3,000	2,600	2,500
Canfield Refining Co., Yale	500	50	40
Champlin Refining Co., Enid	16,000	8,000	9,500
Chestnut & Smith Corp., Sand Springs	5,000	Shut down	1,800
Coleman-Nelson Corp., West Tulsa	2,000	250	250
Cosden & Co., West Tulsa	35,000	25,000	16,000
Cushing Refining & Gasoline Co., Cushing	2,000	600	500
Cushing Refining & Gasoline Co., Blackwell	1,000	700	750
Daisy Bell Petroleum Co., Wilson	2,000	125	125
Empire Refineries, Inc., Cushing	7,000	5,750	6,000
Empire Refineries, Inc., Okmulgee	2,500	2,500	2,500
Empire Refineries, Inc., Ponca City	6,000	5,500	5,500
Fairmont Refining Co., Fairmont	2,500	Shut down	Shut down
Garber Refining Co. (Omar)	2,000	1,400	1,300
Gilmer Oil Co., Ringling	800	Shut down	Shut down
Glen Braden Refining Co., Perry	1,000	Shut down	Shut down
Globe Oil & Ref. Co., Blackwell	5,000	2,500	1,300
Hewitt Refining Co., Hewitt	1,800	700	700
Illipois Oil Co., Cushing	2,500	1,900	2,000
Imperial Refining Co., Ardmore	4,000	3,750	5,000
Indiahoma Refining Co., Okmulgee	9,000	Shut down	Shut down
Inland Refining Co., Cushing	3,000	Shut down	Shut down
Johnson Oil Refining Co., Cleveland	4,000	2,200	2,700
Lorraine Refining Co., Bristow	4,000	2,000	2,000
Marland Refining Co., Ponca City	15,000	10,500	11,000
Maud Oil & Ref. Co., Maud	400	Shut down	Shut down
Nyanza Refining Co., Wilson	3,500	900	800
Oil State Refining Co., Enid	2,000	800	650
Oil State Refining Co., Allen	600	Shut down	Shut down
Oklahoma Prod. & Ref. Corp., Muskogee	3,500	1,200	1,500
Okla.-Tex. Ref. Co. (Sagamore), Grandfield	2,500	2,100	1,700
Pauline Refining Co., Hampton	1,200	700	700
Phillips Co. (Waite), Okmulgee	6,000	4,000	4,100
Peppers Gasoline Co., Covington	1,000	400	350
Pierce Oil Corp., Sand Springs	10,000	7,800	7,500
Producers & Refiners Corp., West Tulsa	7,000	4,500	4,500
Producers & Refineries Corp., Blackwell	3,000	1,000	1,000
Producers & Refiners Corp. (Polar) Sapulpa	2,000	Shut down	Shut down
Pure Oil Co., Ardmore	6,500	2,000	2,000
Pure Oil Co., Cushing	5,000	4,800	4,200
Riley Petroleum Co., Bristow	800	400	400
Rock Island Ref. & Pipe Line Co., Duncan	2,000	1,300	1,300
Roland Oil Co., Bristow	1,500	1,000	1,000
Sapulpa Refining Co., Sapulpa	7,000	3,000	3,200
Shaffer Oil & Ref. Co., Cushing	6,000	5,800	5,800
Southwestern Oil Corp., Enid	1,500	Shut down	Shut down
Superior Oil Corp., Grandfield	3000	Shut down	Shut down
Sun Co., Yale	3,000	2,000	1,800
Sinclair Refining Co., Cushing	6,000	Shut down	Shut down
Sinclair Refining Co., Muskogee	1,000	800	800
The Texas Co., West Tulsa	8,000	8,250	7,500
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,500	1,500
Tidal Refining Co., Drumright	5,000	4,000	4,000
Transcontinental Oil Co., Boynton	2,500	2,000	1,500
Transcontinental Oil Co., Bristow	5,000	5,000	5,000
Tonkawa Petroleum Co., Tonkawa	2,500	Shut down	Shut down
Turley Refining Co. (formerly Home Petroleum Co.) Oklahoma City	2,500	Shut down	Shut down
Union Oil & Ref. Co., Grandfield	2,000	Shut down	Shut down
Wagoner Refining Co., Wagoner	300	Shut down	Shut down
Westheimer & Daube (Bay State), Healdton	1,000	Shut down	Shut down
Whaleback Production Co., Oklahoma City	1,500	200	250
Western Oil Corp., Beckett	1,500	800	800
Yale Oil Corp., Yale	1,500	800	850
Total (includes all plants)	354,100	152,625	144,965

REFINERY OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year.)

Name and location—	Capacity	Runs July 1	Runs June 1
American Oil Corp., Pioneer	2,000	300	300
American Refining Co., Wichita Falls	7,000	4,500	5,000
Boner, H. E., Burkburnett	500	Shut down	Shut down
Boardman Oil Co., Wichita Falls	750	200	200
Buffalo Refining Co., Sherman	500	300	250
Clayton Oil & Ref. Co., Dallas	4,500	2,750	3,750
Cross (H. H.) Refining Co., Corsicana	2,500	800	800
Crystal Petroleum Co., Burkburnett	1,000	Shut down	Shut down
De Leon Refining & Pipe Line Co., De Leon	1,000	300	300
Griswold Oil Co., Wichita Falls	3,000	2,500	2,600
Gulf Refining Co., Fort Worth	15,000	6,200	5,200
Humble Oil & Refining Co., Burkburnett	1,500	1,200	1,000
Humble Oil & Refining Co., Hearne	6,500	6,500	6,250
Interstate Gasoline Products Co., Iowa Park	2,000	Shut down	Shut down
Interstate Refineries, Inc., Ranger	2,000	Shut down	Shut down
Iowa Park Prod. & Ref. Co., Iowa Park	1,500	1,500	800
Keystone Ranger Refining Co., Wichita Falls	2,000	Shut down	Shut down
Lone Star Refining Co., Wichita Falls	4,000	Shut down	Shut down
Miller Petroleum Co., Wichita Falls	3,000	2,500	1,000
Magnolia Petroleum Co., Fort Worth	12,000	6,500	6,700
Magnolia Petroleum Co., Corsicana	10,000	3,000	5,000
Megargel Refining Co., Megargel	1,000	500	200
Mexia Oil & Refining Co., Mexia	600	100	Shut down
Noble Oil & Gas Co., Burkburnett	5,000	3,000	2,500
Olney Oil & Refining Co., Olney	1,000	500	Shut down
Oriental Refining Co., Dallas	6,000	600	600
*Oriental Refining Co. (Trinity), Dallas	5,000	3,000	3,700
Orient Petroleum Co., Wichita Falls	2,000	1,000	750
Paris Refining Co., Paris	500	100	100
Panhandle Refining Co., Wichita Falls	4,500	3,500	1,500
Prairie Refining Co., Grand Prairie	500	Shut down	Shut down
The Petroleum Corp., Electra	2,000	800	Shut down
Primrose Refining Co., Wichita Falls	1,500	800	Shut down
Producers Refining Co., Gainesville	5,000	4,500	4,500
Rinehart Petroleum Co. (Bankers), Iowa Park	2,000	Rerun	Rerun
Skelly Oil Co. (formerly Nortex Ref.), Burkburnett	2,000	Shut down	Shut down
Star Refining Co., Fort Worth	1,500	600	650
Star Refining Co., Dallas	1,000	Shut down	Shut down
Sunshine State Oil & Ref. Co., Wichita Falls	2,500	1,000	1,000
Tidal Western Refining Co., Burkburnett	3,000	1,750	2,000
The Texas Co., Dallas	15,000	8,000	8,000
Texhoma Oil & Refining Co., Wichita Falls	7,000	5,800	5,000
Tiger Refining Co., Breckenridge	1,500	100	100
Transcontinental Oil Co., Fort Worth	5,000	2,500	1,500
Travis Refining Co., Burkburnett	1,000	300	400
Waggoner Refining Co., Electra	3,400	3,250	2,600
White Eagle Oil & Refining Co., Fort Worth	5,000	3,200	2,750
Total (includes all plants)	237,350	84,050	75,500

*Operated by Magnolia Petroleum Co.

REFINING OPERATIONS IN KANSAS
(Plants which have been in operation during the past year.)

Name and location—	Capacity	Runs July 1	Runs June 1
Commonwealth Oil & Ref. Co., Moran	1,800	200	250
Derby Oil & Ref. Co., Wichita	6,000	2,100	2,300
El Dorado Refining Co., El Dorado	3,500	2,000	1,500
Frontier Refining Co., Hutchinson	3,500	Shut down	Shut down
Grant Oil Co., Augusta	500	400	400
Golden Rule Refining Co., Wichita	1,000	550	650
Gordon Refining Co., Florence	2,000	Shut down	Shut down
Industrial Refining Co., El Dorado	1,500	Shut down	Shut down

(Continued on Page 98)

"Not Just Another OIL BURNER—"

but a scientifically designed and manufactured internal atomizing device, for the economical and efficient burning of fuel oil for industrial uses

ADVANTAGES OF "AIROIL" BURNERS

Use only about 1½% of the steam generated by the plant for operation.

Use any grade of fuel oil.

Operate with an oil temperature of less than 150° and an oil pressure of less than 30 pounds.

Will not "flare-back" or "back-fire."

Will not cause carbon deposits.

Will not clog-up or drip.

OTHER "AIROIL" PRODUCTS

OIL Burners for Power Plants.
OIL "Fill-boxes" (Rain-proof)
OIL Fuel Pump Sets.
OIL Heaters.
OIL Measuring Scales.
OIL Strainers and Meters.
Boiler "Peep-Hole" Castings.
Indicating Oil Firing Cocks.
Indicating Steam Regulating Valves.
Fuel Oil Tanks.

"The complete Designing and Installation of Oil Burning Systems."

We suggest that you send for the following Bulletins:—
"OIL BURNING EFFIECINCY" and "OIL BURNING IN POWER PLANTS"

National Airoil Burner Company
922 Thompson St., Philadelphia

If You Use

Commercial Flour Sulphur

We can supply you to your advantage
Write us concerning your requirements

Texas Gulf Sulphur Company

(Incorporated)

General Offices
41 East 42 Street, New York

Sulphur Deposit and Plant
Gulf, Matagorda County, Texas

(Continued on Page 98)

The ROARK

15 Advantages

NO MORE LOOSE, LEAKY LEATHER RINGS

Roark Valve Does Away With Ancient Trouble-Maker. Reduces Cut Oil and B. S., Too!

The ancient source of expense and trouble in pumping equipment—loose, leaky leather rings and cups—is soon to be a thing of the past. The Roark Valve is sweeping the field with such pronounced advantages that it can only be a question of time before its design is in universal use.

Picture any operator putting up with troublesome cups and leather rings, and often also with excessive B. S. and cut oil, once he realizes that by taking advantage of this new design he can do away with rings altogether, reduce B. S. and cut oil, and at the same time increase capacity!

The Roark accomplishes these things by a design which seems amazingly simple but which nevertheless took years to develop. The secret lies in placing the standing valve **below** instead of inside the working barrel—permitting a ball and seat larger than that in the traveling valve, decreasing the speed of the crude as it enters the valve, reducing B. S. and cut oil to a surprising degree, and at the same time permitting a bigger pump stroke, with greater capacity.

For the sake of decreased costs and increased efficiency, we urge you to investigate this improvement at once.

Try a Few and Judge for Yourself

At Your Supply Store or Direct

118

Texas Oil Pump Co

Waco, Texas

NEW SPECIFICATIONS FOR CASING AND OIL COUNTRY TUBULAR GOODS

The Standard Seamless Tube Co., Pittsburgh, Pa., has issued recent bulletins of interest to oil producers and others engaged in the various phases of the oil business. One bulletin gives the specifications on a new kind of casing.

"That better, stronger casing is an absolute necessity today when wells are constantly being drilled deeper and new problems are continually confronting the operator is conclusively proven by the recent investigations of the American Petroleum Institute that have resulted in a demand for seamless casing that will give maximum strength and minimum weight," the bulletin states. "Standard seamless casing meets these requirements in every respect. It has distinct advantages summarized as follows:

"It is made of steel with 0.40 to 0.50 per cent carbon content. It has a stronger, better thread. It is equipped with special seamless couplings. It has a greater resistance to collapsing pressure. It will stand the grief due to shipping and handling better. There is no weld.

For Tubular Goods

The Standard Seamless Tube Co. also has issued a bulletin on the specifications of oil country tubular goods corrected to June 5, 1924, with the approval of the Standardization Committee of the American Petroleum Institute. It reads as follows:

Material Covered—These specifications cover seamless steel tubular goods for oil country use, and include line, drill and drive pipe, casing and tubing. Where the term "pipe" is used in these specifications, it is intended to cover all classes referred to.

Process.—Steel for Seamless tubular goods shall be made by the open hearth or electric process.

Chemical Analysis.—The steel shall meet the following requirements:

Carbon, .40-.55; Manganese, .35-.70; Phosphorous—not over .04; Sulphur—not over .05.

Check Analysis.—(a) Analyses of two lengths of pipe in each lot of 400 or less of each size under 6-inch, and in each lot of 200 or less of each size of 6-inch or over, may be made by the purchaser.

(b) If analysis of only one length of pipe does not conform to the requirements in Paragraph 3, analyses of two additional lengths of pipe from the same lot shall be made, each of which shall conform to the requirements specified.

(c) Drilling for analyses shall be taken from several points around the lengths selected and shall be entirely through the wall at each point drilled.

Physical Properties.—(a) Pulling test pieces cut longitudinally from finished lengths and not flattened before testing shall meet the following minimum physical properties:

Ultimate strength, lbs. per sq. in. 75,000
Yield point, lbs. per sq. in. 45,000
Elongation in 2 inches, per cent.. 20

(b) The yield point shall be determined by the drop-of-the-beam method.

(c) One pulling test may be made on a length of pipe in each lot of 400 or less, of each size under 6-inch, and in each lot of 200 or less, of each size, 6-inch or over.

(d) Tension test specimens shall be cut from either end of the pipe so that the remainder of the pipe may still be used.

(e) Re-tests.—If the results of the physical tests of any lot do not conform to the requirements in (a) re-tests of two additional lengths of pipe shall be made, each of which shall conform to the requirements specified.

(f) All testing shall be done cold.

Hydrostatic Tests

(a) Each length of pipe shall be tested at the mill at any pressure between the minimum and maximum hydrostatic pressures listed in table of sizes. Pipe shall be struck near both ends while under pressure, a blow with a 2-pound hammer or its equivalent and the hydrostatic pressure specified shall be maintained for not less than 5 seconds.

(b) The test pressure on any size not listed shall not exceed that required by the formula.

$$P = \frac{2\,St}{D}$$

Where P = Pressure in pounds per square inch.
S = Allowable fiber stress 16,000 lbs. sq. in. max. pressure and 14,000 lbs. sq. in. minimum pressure.
t = Wall thickness in inches.
D = Outside diameter in inches.

(c) The test pressure on any size shall not exceed 2,500 lbs. square inch.

Drift Tests.—(a) Each length of casing and drive pipe for sizes not over 8⅝-inch O. D. shall be drifted with a cylindrical mandrel not less than 6-inch in length and having a diameter of ⅛-inch smaller than nominal I. D. of pipe.

(b) 2-inch and 2½-inch tubing shall be drifted to insure free passage of a plunger 42 inches long and 3-32-inch smaller than nominal I. D. of tubing. On sizes larger than 2½-inch the plunger shall be ⅛-inch smaller than the nominal I. D. of tubing.

Lengths.—Unless otherwise specified, pipe shall be furnished as to minimum lengths in accordance with the following regular practice:

Tubing and rotary drill pipe.....20 ft.
5% of order may be shipped to a minimum length of.....18 ft.
Casing and drive pipe.....18 ft.
Line pipe.....16 ft.

Jointers (two short lengths connected by couplings, the mininmum length of the shorter piece to be at least 5 feet), may be shipped to a maximum of 5 per cent of the order for line, casing and drive pipe. No jointers shall be shipped on tubing or rotary drill pipe orders.

Weight Variation.—The weight of any length of pipe shall not vary more than 3½ per cent under or 6½ per cent over that specfied; but the carload weight shall not be less than the nominal weight. Each joint shall be weighed separately with couplings screwed on but with thread protector removed. In arriving at carload weight proper allowances are to be made for thread protectors.

Tolerances

(a) The wall thickness shall not be more than 12½ per cent under the nominal wall thickness at any point.

(b) For pipe 1½ inches I. D. or under, the outside diameter at any point shall not vary more than 1-64-inch over nor more than 1-32-inch under the standard size.

For pipe (except casing) 2-inch I. D. or over, the outside diameter shall not vary more than 1 per cent over or under the standard size.

For casing, 6-inch O. D. and under, the outside diameter at any point shall not vary more than 1-32-inch over or under the standard size.

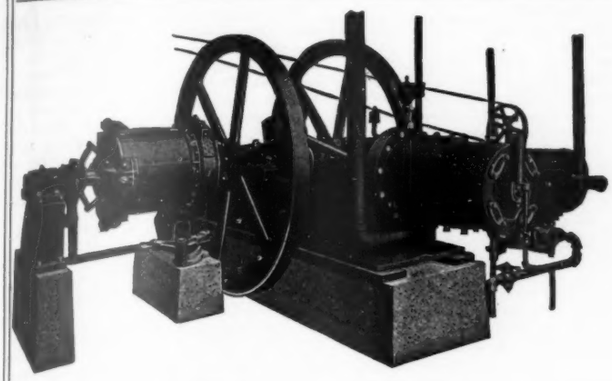
For casing over 6-inch O. D., the outside diameter shall not vary more than ½ per cent over or under the standard size.

Threads.—(a) All threads shall be in accordance with the American standard and cut so as to make a tight joint when the pipe is tested at the mill to the specified internal hydrostatic pressure.

(b) The variation from standard size on 10-thread and 11½-thread material should be 1½ turns either way; on 8-thread, ¾-inch taper, one turn either way when tested with a standard working gauge.

(c) The threads on pipe for rotary drilling purposes may be rounded top and bottom, when specified, with a radius of .017-inch on threads of 8 pitch.

Taper.—The taper of threads on both pipe and couplings shall be tested by approved methods at intervals sufficient to insure the taps and dies are in proper



REID
Drilling Engines
—successful in any field

In West Virginia
In Ohio
In Pennsylvania

A 30-H. P. REID Gas Drilling Engine drilled a well 4,640 ft. deep in ninety-six days and with gas at 30c M. the fuel cost per foot of hole was only .058c.

A 30-H. P. REID Gas Drilling Engine drilled a well 3,146 ft. deep in 37½ days, using only 214,000 cu. ft. of gas.

A 30-H. P. REID Gas Drilling Engine drilled a well 2,050 ft. deep in 19 days and with similar fuel economy, although actual figures are not available.

Ask for Bulletin No. 28—"Drilling Wells With Reid Gas and Oil Engines."

JOSEPH REID GAS ENGINE COMPANY, Oil City, Pennsylvania, U.S.A.

BRANCHES AND AGENCIES—Marietta, Ohio; Logan, Ohio; Newark, Ohio; Ft. Recovery, Ohio; Haynesville, La.; Shreveport, La.; Charleston, W. Va.; R. B. Moore, Bolivar, N. Y.; Bradford Supply Co., Robinson, Ill.; Frick & Lindsay Co., Bradford, Penna., and Kentucky Distributors; S. R. Shoup, 708 Pacific Electric Bldg., Los Angeles, Cal.; Oklahoma, Kansas, Texas, Arkansas and Wyoming, Frick-Reid Supply Company, Tulsa, Oklahoma, and Branches. Branch Shop, Tulsa, Okla.

14

BIT AND JAR-STEEL
BOX-PIN-STEEL-SLIP-STEEL

UNDER-REAMER-BODY and CUTTER STEEL, DRILL COLLAR STEEL

ASCO

CAPPING and SOCKET STEEL TOOL-JOINT STEEL

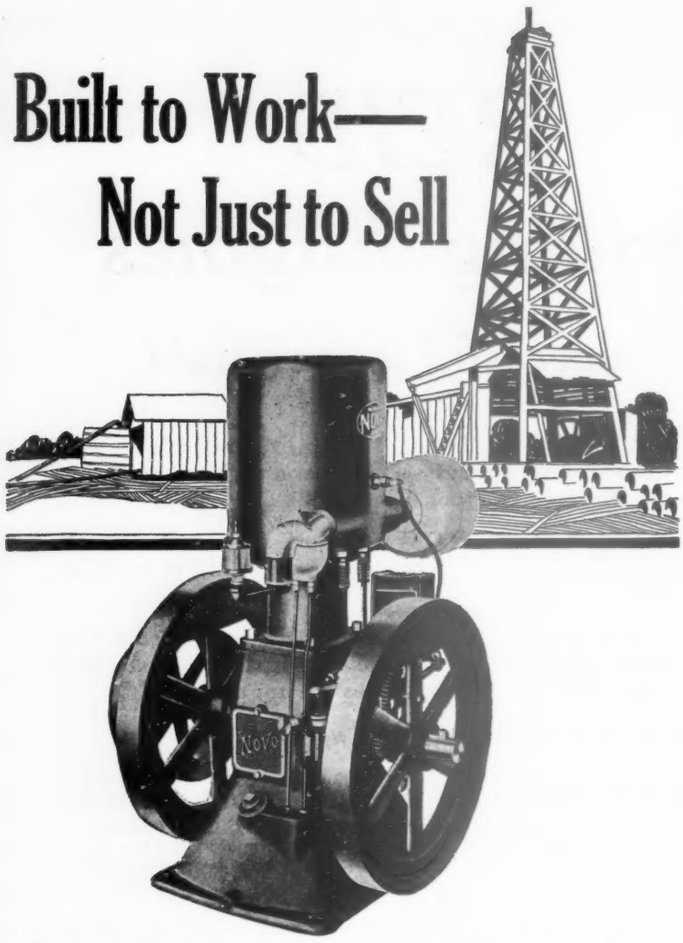
SPECIAL-HIGH-GRADE

SPECIAL ALLOY STEEL **FORGING-BILLETS** QUALITY and SERVICE

Manufactured By

ANDREWS STEEL CO.
NEWPORT, KY.

Built to Work— Not Just to Sell



There's as much difference in engines as in watches. Some are built to sell—others to maintain the reputation of their makers.

We are as much concerned with the service given by Novo Gasoline Engines years after they are put to work as on the day they were sold. Novo service is kept at a high peak of efficiency because Novo responsibility extends through the life of the engine.

It costs no more to buy this service than it does to buy any other high grade engine. Specify Novo and you specify "Reliable Power."

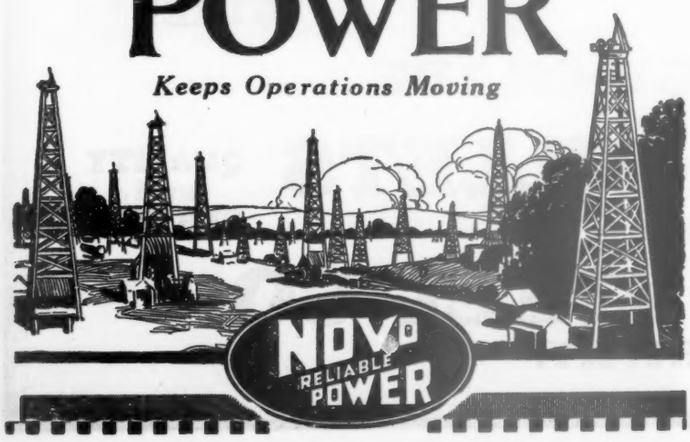
Novo Gasoline Engines—one, two and four cylinder—are made for every power requirement up to 40 H. P. Novo pumps, hoists and compressors are available in many types, sizes and capacities for users who demand Novo reliability in outfits as well as engines.

24

NOVO ENGINE CO.
Clarence E. Bement, Vice-Pres. & Gen. Mgr.
LANSING MICHIGAN
Distributors Throughout the World

NOVO POWER

Keeps Operations Moving



adjustment. The variation in taper shall not exceed the following limits:

Taper.—Specified:

Taper per foot....	1/12"	3/8"	3/4"
Maximum taper....	1/12"	1/2"	7/8"
Minimum taper..	5-32"	11-32"	23-32"

Couplings.—Each length of pipe shall be screwed up tight with one coupling made of seamless steel, the threads of which shall be electro-galvanized to minimize galling. Couplings shall be tapped concentric and when inspected by an approved alignment device shall not show more than 3/4-inch out of line in a length of 20 feet on all tubular goods except drill pipe. Couplings on drill pipe shall be in line within 1/2-inch in a length of 20 feet.

(b) For alignment tests one coupling may be taken from each lot of 100 or less. In case this coupling fails, two more couplings may be taken from the same lot, each of which must be within the alignment specified, otherwise the lot shall be rejected. In any case, the manufacturer may test rejected couplings individually, if desired.

Thread Protectors

Approved thread protectors shall be provided on each length of pipe to prevent injury to the thread during shipment.

Marking.—The length, weight, hydrostatic test pressure and manufacturer's name shall be stenciled on each length of pipe.

Finish.—The finished pipe shall be reasonably straight and free from injurious defects. All burrs at the ends of pipe shall be removed.

Inspection.—The inspector representing the purchaser shall have free entry, at all times while work on the contract of the purchaser is being performed, to all parts of the manufacturer's works which concern the manufacture of the pipe ordered. The manufacturer shall afford the inspector, free of charge, all reasonable facilities to satisfy him that the pipe is being made in accordance with these specifications. All tests and inspection shall be made at the place of manufacture prior to shipment, unless otherwise specified and shall be so conducted as not to interfere unnecessarily with the operation of the works.

Rejection.—Material which shows injurious defects subsequent to acceptance at the manufacturer's works may be rejected and the manufacturer shall be notified.

W. KENTUCKY-TENNESSEE

(Continued from Page 58)

pumper in its No. 25 Mercer at 963 feet. Shale was found from 788 to 876 feet and the sand from 944 to 959 feet.

Drilling Operations

Rockfield District: Gillespie Co.'s No. 8 Gillispie 50 acres, was drilling at 600 feet; Baker-Jones Syndicate's No. 2 Gillespie 103 acres was drilling deeper; No. 3 for the same parties was spudding; Bolling & Lowman's No. 6 Ben Price was drilling 65 feet below the shale; Ruby Consolidated Development Co.'s No. 5 Price-Hall was being rigged up; same concern's No. 6 Bryant was drilling at 327 feet; Amfot Oil Corp.'s Nos. 6 and 7 Jess Shanks are both due in next week; Olive-Green Oil Co.'s No. 6 McLemore was making hole at 654 feet; Cunningham & Henry were spudding No. 3 Bryant; H. W. Ennis and others' No. 2 Virgil Potter was spudding at 45 feet; Gordon Fielder's No. 2 McGinnis was shut down at 350 feet; H. J. Dobson's No. 3 Rigglewood was shut down at 115 feet; Fisher's No. 1 M. V. Hatcher was due in the shallow sand; Allen's No. 3 Kuykendall was drilling at 354 feet; the Illinois-Kentucky Oil Syndicate was moving a rig to drill No. 6 on the Vance.

Davenport Pool: T. A. Sheridan was drilling Nos. 2, 3 and 4 G. Davenport 1,000 acres, at 675, 542 and 324 feet, respectively; the Westland Oil Corp.'s No. 25 C. A. Keller was 654 feet and drilling.

Sandidge Pool: F. W. Evans' No. 1 Miller was shut down at 450 feet; Cadet Oil & Gas Co.'s No. 21 Biddle was progressing at 876 feet; Makeever Brothers' No. 10 Young was 460 feet and drilling; the Green Star Oil Co.'s No. 1 H. Carson was rigging up to start.

Waller-Runner district: Ohio Fuel Oil Co.'s No. 7 Garrett was drilling below the shale; Miami Oil & Gas Co.'s No. 7 J. W. Lowe was cleaning out after a shot; G. D. Miller's No. 6 Massey-Rabold is 3 feet off the sand and will be drilled in about Thursday; the Wood Oil Co.'s No. 13 Jim Isabel is waiting on a shot; same company's No. 4 Oliver Grimes was spudding at 76 feet; the Royal Oil Co. was rigging up to drill No. 2 on the R. H. Gott.

In eastern Warren, the Bryner Oil Co. is starting its No. 6 on the Martin farm; Toronto parties' No. 4 Bunch was waiting for a shot; Tom's No. 3 Motley was a location as was J. T. Williams' No. 3 Hawthorne.

Owensboro District

The present week in the Owensboro Field shows four completions, all of them being in the Pellville district. The Pellville Oil Co.'s No. 1 Oscar Long was dry at around 760 feet; H. F. Gibson's No. 1 H. Brown, adjoining the Ashworth, was making 12 bbls. at 748 feet with 30 feet of Barlow sand; the Dearborne Oil Co. got a 10-bbl. pumper in its No. 1 on the Taylor 16 acres, in the Barlow sand at 736 feet. It is in the northwest corner of the lease and was drilled to offset No. 13 Amanda Stewart; the Kentucky Oil Co. completed its No. 2 on the W. G. Payne farm, 400 feet east of No. 14 A. Stewart, for a 7-bbl. pumper at 747 feet, 23 feet in the Barlow sand. No. 3 Payne is on top of the pay and ready to drill in while No. 4 is spudding.

Allen County Completions

Two producers and four dry holes is the record for the week in the Allen County Field. In the Gainesville district, north of Scottsville, the Russell Oil Corp. got a 12-bbl. pumped in its No. 14 on the Burton Brothers tract at a total depth of 476 feet, immediately below the shale. In the same district, J. R. English finished a 10-bbl. starter in his No. 10 on the A. Hobdy farm at 372 feet; McKinney and others of Pennsylvania got a duster in their initial test on the W. C. Wilson farm. No. 2 is spudding at 32 feet.

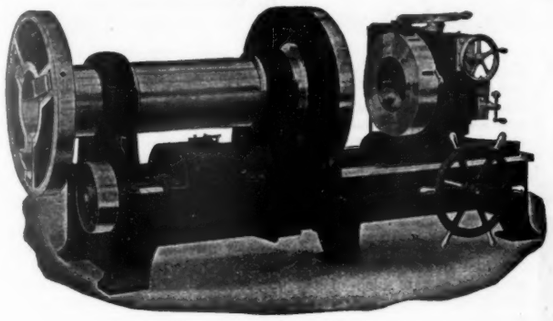
In the Satterfield area, C. Smith, No. 11 Smith was dry and abandoned at 512 feet. In the Kerley Pool, southwest of Scottsville, Forrest & Co.'s No. 6 Lyle was reported dry at about 265 feet; Peerson & Neeley's No. 1 Harris, adjoining the Morris, in the same pool, was plugged at 345 feet.

CANADA IS IMPORTING CRUDE FOR REFINERIES

With the growth of refining facilities in Canada, the imports of crude petroleum for refining in that country show a steady increase, receipts of oil for this purpose during the fiscal year ending March 31, 1924, being about 7 per cent above those in 1921-22 and some 5 per cent more than during 1922-23, says the Petroleum Division of the Department of Commerce. The output of Canadian refineries, however, does not appear to have taken care of the increase in the domestic demand for refined petroleum products, and importation of these products has continued to grow. Illuminating oil is the only major product to show a decrease, the receipts of this item during the last fiscal year being only a little more than half the quantity imported two years previously, although some gain is noted over 1922-23.

The total imports of petroleum, asphalt and products into Canada during 1923-24 were valued at $32,344,725, or about 3½ per cent of the total merchandise imports for consumption, of which the petroleum products supplied by the United States were valued at $28,689,374, or 70 per cent of the total.

Exports of petroleum products refined in Canada are shipped chiefly to Newfoundland, with the United States and the British West Indies receiving smaller quantities. During the last fiscal year, 1,516,511 Imperial gallons of illuminating oils were exported from Canada, of which 1,258,420 gallons went to Newfoundland.



An Invitation to You

You are invited to notice the strong arrangement of the driving mechanism of the Bignall & Keeler Pipe Machines. Machines are driven through a compact gear-box, containing steel gears, running in oil, which are easily shifted for the required speed changes and deliver power directly to the gripping chuck from below. The strongest possible arrangement.

SEND FOR THE CATALOG

BIGNALL & KEELER MACHINE WORKS
EDWARDSVILLE, ILL.

A Part of the Famous Barsco Products

Texas Pattern Casing Shoe

Drive Shoes
Casing Shoes
Casing Clamps
Anchor Clamps
Gas Packing Clamps
Rotary Tool Joints
Male & Female Steel Nipples
Shoe Guides

Male & Female Steel Nipple

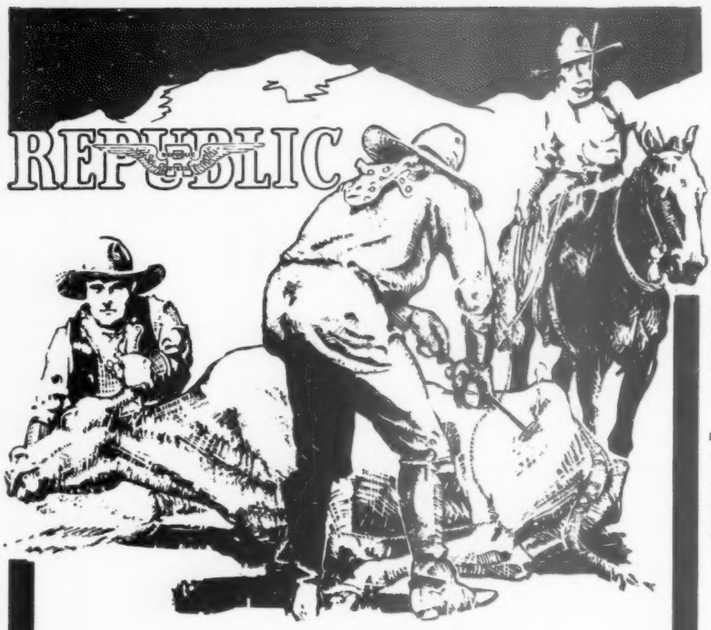
New Catalog just off the press
Write for copy

Gas Packing Clamps With Gas Outlet

BARTLESVILLE SUPPLY CO. OF MO.
3400 Maury Ave., St. Louis, Mo.

Stocks carried by Dealers and Nichols Transfer & Storage Co., Tulsa, Oklahoma for your convenience.

Regular Pattern Casing Shoe



"Branded"

It pays to buy branded materials in the oil country---it pays to buy these materials from companies of old standing.

Tubing—Casing—Line—Drive
Rotary Drill Pipe

Write for quotations

Republic Iron & Steel Co.

General Offices:

Republic Bldg., Youngstown, Ohio

SALES OFFICES:

Buffalo	San Francisco	Cleveland
Boston	Philadelphia	Dallas
St. Louis	Cincinnati	Detroit
New York	Pittsburgh	Chicago
		Birmingham

OIL AND COAL COMPARED AS FUEL IN PURCHASING AGENT'S VIEWPOINT

By Thomas Harris, Jr.*

Before Ninth Annual Convention of National Association of Purchasing Agents, Boston

During the year 1923 there was consumed in the United States approximately 260,000,000 barrels of gas and fuel oil and 614,000,000 tons of coal of all kinds and assuming, for comparative purposes, that four barrels of fuel oil is equivalent to a ton of coal, the consumption of fuel oil as fuel oil is one-ninth as great as coal. This is not entirely accurate as in some specific cases either fuel oil or coal is used where the other would not readily be a substitute, and also not all the fuel oil is consumed as fuel, but it gives us a fair idea of the importance which fuel oil has attained over the last decade.

As fuel oil is only economical as a substitute for coal, generally speaking, within a relatively short distance by rail from the refining and producing centers of the oil industry or from navigable waters, this problem resolves itself primarily to three fuel consuming centers in the United States, namely:

First—West Coast;
Second—Mid-Continent and Gulf;
Third—East Coast.

West Coast

First—In the case of the West Coast, coal is not a competitive factor with fuel oil except possibly in the extreme northwest where coals are shipped in from the Dominion of Canada. However, the hydro-electric plants, principally in California, are carrying a large burden of fuel requirements. Here the fuel oil is around 14 degrees Baume and the price in California has fluctuated from 80 cents to $1.60 per barrel at the refinery, price depending primarily on supply and demand of fuel oil. The domestic consumption of fuel oil in this center is far ahead of the rest of the United States. At the present time, the production of crude on the West Coast is in excess of the requirements for fuel oil; however, with some of the oil producing companies contracted for shipment of crudes to the East Coast through the Panama Canal, fuel oil has been somewhat scarce which has caused a 40 per cent increase in prices over the last five months. Another factor which has assisted in this increase has been the requirements of fuel oil consumping plants to the hydro-electric plants due to low water supply caused by a prolonged dry season. It is prodicted by geologists that there will be plenty of crude oil available on the West Coast for their own requirements for some years to come.

Mid-Continent and Gulf

Second—In the Mid-Continent and Gulf center the fuel oil is of lighter Baume, averaging around 26-30 and the large bulk of gas oil for producer plants is refined from the Mid-Continent crudes. These are the fuel oils that are being stocked by the refining companies to put through cracking furnaces to make additional gasoline to meet the anticipated 25 per cent increase in demand of gasoline.

However, on account of a retardent spring, stocks are rather heavy in these lighter fuel oils and prices are declining.

The heavier fuel oils in this center compete somewhat with coals also obtained throughout central United States and competition depends entirely upon the distance of the consumer from a source of supply, either fuel oil or coal, as the high freight rates make a tremendous difference in ultimate cost. At present the Mid-Continent price for fuel oil is high and the price of coal is low. Domestic consumption of fuel oil in certain cities where tank wagon deliveries are available has been on the decided increase over the past 12 months. Geologists are agreed that there is still available a large amount of crude oil throughout this center.

Third—On the East Coast center outside of the lighter fuel oils made from Mid-Continent crudes piped East from the Mid-Continent district which are consumed principally for special requirements such as producers' plants, steel mills and for domestic use, the bulk of the fuel oil consumed is divided into two headings: Bunker C (16 Baume, 150 flash closed cup, refined from California crudes and southern Mexican crudes) and Panuco crude oil (12 Baume low flash from North Mexico, a crude which is either burned as fuel without refining or is refined and cut back with lighter fuels to make bunker C oil; or this crude is consumed by asphalt companies, (estimated at 6 per cent).

The competition between the coal and fuel oil in the East Center is in favor of coal at the present time due to the decline in shipments east of California crudes which in 1923 had taken the place of the previous declines in production of Mexican crudes. The production of Mexican crudes has been fairly stationary over the last two months. On the other hand coal prices have declined materially until now in numerous cases, coal is sold at the cost of mining.

Future development of fuel oil (12-16 Baume) for marketing in the East Coast center will come from Mexico and Venezuela, and from all reports there should be much development of oil production from both of these oil regions in the next few years.

Consumers of fuel oil in the East Coast center can be ranked in their order of preference for oil as follows:

A. Maritime requirements. Here, due to the saving in cargo space and time of bunkering, ship can afford to pay a higher price than practically any other consumer of fuel oil.

B. New England and southern plants can pay more for oil than plants located closer to the coal regions of West Virginia, Maryland, Pennsylvania on account of higher coal freight rates (the cost of an increase in rail haulage far exceeds that of an increase in water transportation).

C. Tidewater plants. If delivery must be made by rail even through a short haul rather than by barge or tanker, the ultimate cost of fuel oil delivered is materially increased.

D. Inland plants.

Office buildings in large cities where tanker wagon deliveries are available can pay more than the average oil consumer on account of decreased requirements in valuable basement space for storage and boiler capacity as comparted with coal consuming. Also plants who have fewer insurance restrictions due to local conditions can burn cheaper petroleum fuel (Banco crude) with its low flash.

Advantages of Oil and Coal

It is imperative that before installing either fuel oil or coal burning apparatus, a very careful study should be made by the engineering department or by a competent consulting engineer hired for that purpose relative to the advantages and disadvantages of coal and oil for the local requirements, and also by the purchasing agent relative to the best proposals than can be obtained not only from a price standpoint but from a standpoint of reliability, continuity and feasibility of both coal and oil. Every local plant has its own peculiar conditions which should be carefully considered prior to either changing over from one fuel to another or prior to the installing of original equipment in the case of a new installation.

Below is listed some of the advantages of each fuel to give an idea of some of the factors which should be borne in mind in making this study prior to final decision.

Fuel Oil Over Coal

First—Less boiler house equipment required, due to the fact that higher overloads are possible.

(Continued on Page 100)

*Division purchasing agent, E. I. du Pont de Nemours Co., Wilmington, Del.

Standard Pipe Threaders and Cutters

THERE are many different notions as to what "efficiency" means. Actually, it is achieving the greatest possible results with the least possible cost and trouble.

That is "efficiency," and that is how the STANDARD PIPE THREADER and CUTTER functions—efficiently.

Rugged construction, simplicity of design, ease of operation, results—all things that tend to efficient performance will be found in the STANDARD.

The STANDARD is made in all regular sizes up to and including 24 inch.

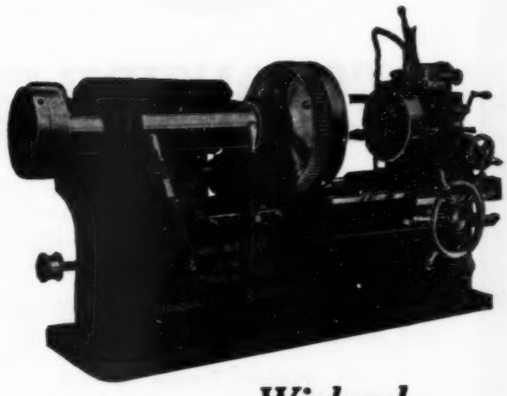
The STANDARD Bulletin gives much interesting information—write for it.

Standard Engineering Company

Ellwood City, Penna.

San Francisco Office: Claus-Spreckles Bldg

What Is the Meaning of "Efficiency?"



Wieland

B. & S. A. S. M. E. CODE DRILLING BOILER

Designed, Built, Tested and Stamped according to the

A. S. M. E. CODE

THE CHAMPION STEAMER

Bovaird & Seyfang Manufacturing Co., Bradford, Pa.

Also carried in stock by the Republic Supply Company and the Bovaird Supply Company. Write for descriptive circular No. 15

RESPONSIBILITY

The return of your investment is dependent upon every foot of wire line that goes down your casing. You cannot afford to use any rope that does not have

Highest Tensile Strength
Flexibility
Shock Resistance

Wickwire Drilling Lines, a product embodying these three features, are backed by the famous

WICKWIRE SPENCER STEEL CORP.

a reminder of the reliability of all Wickwire Spencer products.

CARRIED AT THE FOLLOWING POINTS FOR THE PETROLEUM INDUSTRY

Augusta, Kans.
Bradford, Pa.
Bristow, Okla.
Buffalo, N. Y.
Burbank Field, Okla.
Butler, Pa.
Cleveland, Okla.
Cushing, Okla.
Emlenton, Pa.
Knox, Pa.
Marland, Okla.
Morrison, Okla.
New Martinsville, W. Va.
Okmulgee, Okla.
Pawhuska, Okla.
Ponca City, Okla.
Shidler, Okla.
Tulsa, Okla.
Washington, Pa.
Waynesburg, Pa.
Webb City, Okla.
Weleetka, Okla.
Woodsfield, Ohio
Winfield, Kans.
Yale, Okla.

DISTRIBUTORS

Clarion County Machine Co., Knox, Pa.
A. F. Keck & Co., Butler, Pa.
Lloyd Smith Co., Bradford, Pa.
H. B. Mitchell Co., Emlenton, Pa.
New Martinsville Supply Co., New Martinsville, W. Va.
Murray Tool & Supply Co., Tulsa-Cleveland, Okla.
Federal Supply & Machine Co., Augusta and Winfield, Kans.

Wickwire Spencer Steel Corporation
41 East 42nd St., New York

156

MID-CONTINENT REFINERY RUNS INCREASE 4 PER CENT

(Continued from Page 90)

Kansas-Texas Petroleum Co., Wichita	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	4,500	3,200	2,600
Kansas Oil Refining Co., Coffeyville	1,500	500	Shut down
Kansas City Refining Co., Kansas City	4,000	3,600	3,600
Mutual Refining Co., Chanute	1,000	Shut down	Shut down
Moore Refining Co., Arkansas City	6,000	2,900	2,900
Miller Petroleum Co., Humboldt	2,000	Shut down	Shut down
Mo-Kan Refining Co., Kansas City	700	Shut down	Shut down
National Refining Co., Coffeyville	10,000	4,900	4,900
Peerless Oil Refining Co., Chanute	3,500	1,600	1,700
Red Bird Refining Co., Fredonia	200	100	100
Richardson Refining Co., El Dorado	1,500	Shut down	Shut down
Roxana Petroleum Corp., Arkansas City	15,000	9,800	8,500
Sinclair Refining Co., Coffeyville	6,500	4,600	5,100
Sinclair Refining Co., Argentine	8,000	4,200	5,400
Skelly Oil Co., El Dorado	14,000	8,000	7,750
Sterling Oil & Ref. Co., Wichita	5,000	Shut down	3,700
Standard Oil Co. of Kansas, Neodesha	13,000	12,000	12,000
Tri-State Oil & Ref. Corp., Wichita	1,200	Shut down	Shut down
Vickers Petroleum Co., Potwin	1,800	1,600	1,800
White Eagle Oil & Ref. Co., Augusta	7,500	5,750	4,800
Southern Missouri Group—			
Interstate Refineries, Inc., Centropolis	1,500	Shut down	Shut down
Marshall & Co., Sheffield	2,500	Shut down	Shut down
St. Joseph Viscosity Oil Co., St. Joseph	500	Shut down	Shut down
Wilhoit Refining Co., Joplin	1,500	800	1,000
Total (includes all plants)	138,600	68,800	70,150

REFINING OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year.)

Name and location—	Capacity	Runs July 1	Runs June 1
Arkansas Oil & Ref. Co., Fort Smith	1,000	Shut down	Shut down
Cross Refining Co., Smackover	2,000	1,500	1,500
Farmers Oil & Ref. Co., Texarkana	750	Shut down	Shut down
Four States Refining Co., Texarkana	2,000	Shut down	Shut down
Grison Refining Co., El Dorado	750	Rerun	Rerun
Home Oil & Ref. Co., Camden	750	350	400
Hot Springs Refining Co., Hot Springs	500	225	200
Houston Oil Co., Camden	5,000	Bldg.	Bldg
Jones & Co., R. C., El Dorado	1,000	Shut down	Shut down
Kettle Creek Refining Co., Pearson	4,000	3,000	3,000
Lion Oil & Ref. Co., El Dorado	12,000	6,200	6,000
McMillian, Fehlman & Oliver (operating New Ark Refining Co.), El Dorado	1,500	Shut down	Shut down
Ouachita Valley Refining Co., El Dorado	1,500	900	1,000
Pine Bluff Refining Co., Pine Bluff	2,000	Shut down	Shut down
Root Refineries, El Dorado	3,000	1,800	1,750
Shippers Petroleum Co., El Dorado	700	Shut down	Shut down
*Union Pipe Line & Refining Co., El Dorado	4,000	Rerun	Rerun
Total (includes all plants)	41,700	13,975	13,750

*Leased by Ouachita Valley Refining Co.

REFINING OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year.)

Name and location—	Capacity	Runs July 1	Runs June 1
Caddo Central Oil & Ref. Co., Shreveport	3,500	3,000	3,500
Caddo Central Oil & Ref. Co., Shreveport	5,000	5,000	5,000
Louisiana Oil Refining Corp., Shreveport	8,500	8,000	8,000
Louisiana Oil Refining Corp., Bossier	3,000	800	1,000
Red River Refining Co., Crichton	1,800	Shut down	Shut down
Shreveport Producing & Refining Co., Shreveport	5,000	4,000	4,000
*The Texas Co., Ardis	6,000	4,000	6,000
Total (includes all plants)	33,500	24,800	26,000

*Topping.

INCREASED ACTIVITY IS REPORTED IN VENEZUELAN FIELDS THIS YEAR

The year 1924 opened with increased activity in all lines of petroleum development and exploitation in Venezuela. The question of transportation is still the outstanding problem in the development of the oil resources of the Maracaibo territory. The Dutch-Shell interests, to whom the problem is most immediately urgent—as they are at present the only important exporters—have adopted at least temporarily the policy of using small tankers, which can go over the 11-foot bar at the entrance to the lake.

During the year 1923 several new tankers were added to their fleet, which on January 1, 1924, included 1 Venezuelan and 11 Dutch vessels, with net tonnage ranging from 450 to 1,950 metric tons. In addition to these boats, four more tankers, larger than any now in use, are being constructed and will be put into service during the current year.

Extensive Drilling Operations

At the beginning of 1924 there were accelerated drilling operations on the part of these interests, particularly those of the Caribbean Petroleum Co., the Venezuelan Oil Concessions (Ltd.), and the Colon Development Co. The British Controlled Oilfields is also continuing drilling operations with marked energy.

Principal drilling activities are centered about Mene Grande, La Rosa, and El Mene. There are now more than 30 strings of tools running at Mene Grande, the oldest and still leading field in production. The El Mene Field is particularly important because of the high-grade oil (41° gravity) produced. Oil from this field is being delivered under contract to the Caribbean Petroleum Co.

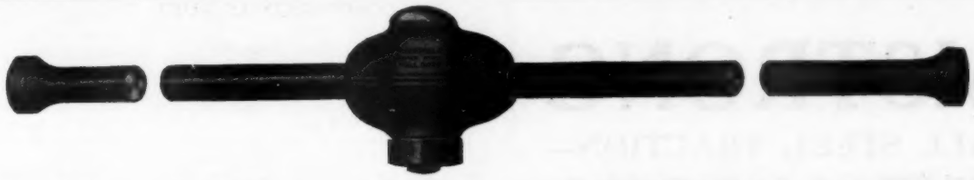
The La Rosa Field, however, is by far the most interesting field by reason of the fact that the biggest wells in the whole district have been brought in in that field. The 150,000-bbl. well brought in on December 9, 1922, by the Venezuelan Oil Concessions (Ltd.), which ran wild for nine days before shutting itself, was in this field. The British Equatorial Corp. (now merged with American interests) brought in about the middle of April, 1924, a well said to be capable of producing 60,000 bbls. of oil per day. A number of different oil companies contemplate the initiation of drilling operations in the vicinity of La Rosa.

High-Grade Strike at Conception

The Maracaibo district, lying immediately west of the city of Maracaibo, has come into prominence by reason of the important wells at La Paz and Concepcion, both properties of the Venezuelan Oil Concessions (Ltd.). The La Paz well, said to have a daily production capacity of 25,000 bbls., was brought in during 1923. Recently an important strike of oil was made at Concepcion, one oil stratum being encountered at approximately 350 feet. Drilling continued, and at about 800 feet another stratum was struck, said to have a productive capacity of about 500 bbls. of a very fine grade of oil (38° gravity). Drilling is being continued at this well.

Production in these fields during the present year shows a marked increase over 1923. The exports for the first three months of 1924 show a total of 164,096 metric tons, of which 46,042 tons were exported in January, 46,773 in February, and 71,281 in March. The Caribbean Petroleum exported 100,699 tons of this amount, the Venezuelan Oil Concessions 35,117 tons; and the British Controlled Oilfields 22,280 tons.

The Venezuelan Oil Concessions reported the completion of No. 7 early in June at 1,550 feet, with a production of 700 tons a day pinched in.



A Pull Rod Head That Will Not Pull Off

The largest producers in the oil trade are using Sheffield Super Steel Pull Rods because they give the most dependable results under exacting working conditions.

The Sheffield Super-Steel Pull Rod has an **unequalled performance record.**

The head will not pull off because of the special fillet under the head.

The rod will not break—it is made of special analysis steel.

For absolute dependability specify the Sheffield Super-Steel Pull Rod.

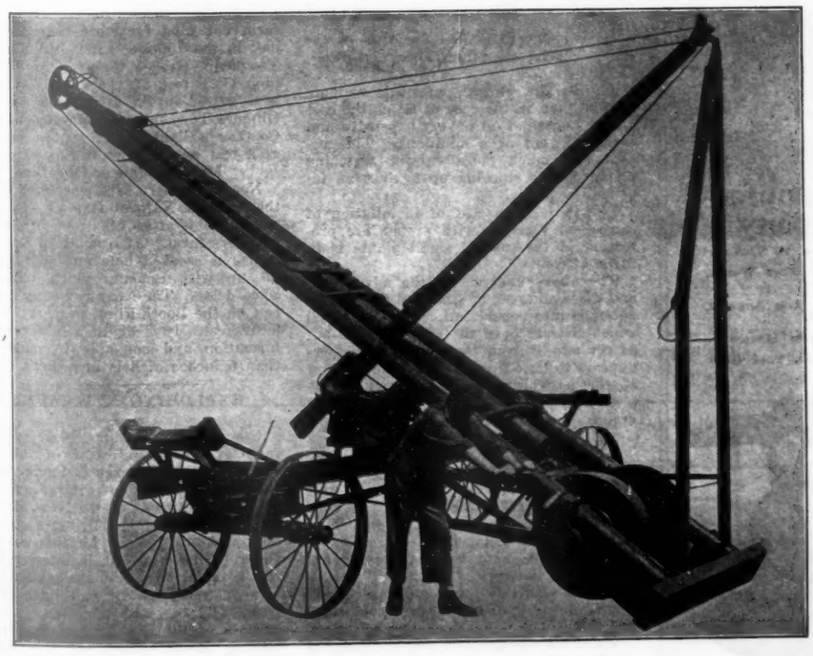
Order from your supply house; if they do not have them, write us direct.

The Kansas City Bolt & Nut Company
SHEFFIELD STEEL MILLS
Sheffield Station, Kansas City, Mo.

SHEFFIELD
SUPER STEEL
PULL RODS

MADE OF SPECIAL ANALYSIS STEEL

THEY FALL HARD



More than one-half of all pulling machine troubles comes when raising the mast with a team of horses. All horses won't stop just when you want them to, guy stakes will pull out, ropes or blocks will break, and when any of these things happen down comes the machine—a subject for the junk pile or a trip to the repair shop. Why waste profanity, time and dollars when

Our Iron King

may be set up by one man, unaided, without fastening a single guy line, and he cannot pull it over if he tries.

If your oil field supply store will not get you an IRON KING write us direct. We have a catalog for you.

THE IRON KING Manufacturing Co.
Bradner, Ohio

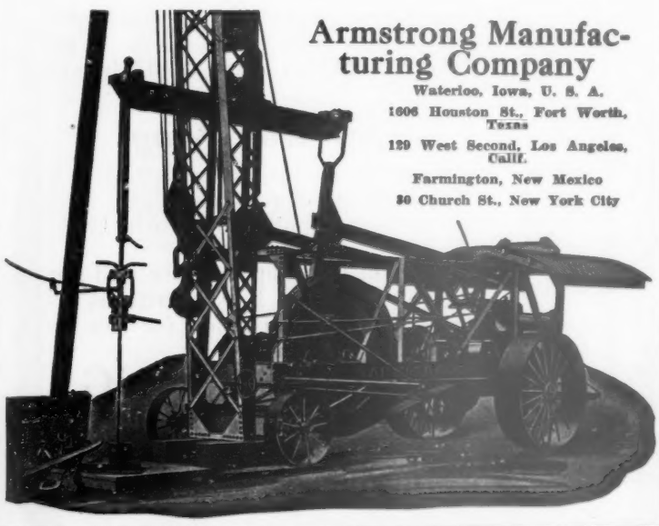
Say you saw it in The Oil and Gas Journal

ARMSTRONG
—NO. 50 ALL STEEL TRACTION—
OIL WELL DRILL

Experienced Oil Well Operators will appreciate the many special features of this wonderful drilling machine—the greatest improvement in drilling machines in fifty years:

ALL STEEL: No wood to rot, burn, break, shrink, or wear out. No screws, nuts, nor bolts—it is built like a steel bridge, every part hot riveted in place. It cannot warp, nor twist, cannot get out of shape nor throw the shafting out of alignment. CAPACITY, 1,000 feet; weight of tools, 2,200 lbs.; POWER, 22½ H. P.—4-cylinder; 4-cycle gasoline engine. BAND WHEEL CLUTCH guaranteed against breakage from any cause during life of machine. REVERSING TRANSMISSION enables operator to reverse band wheel or any shaft in the machine at will. Makes power more flexible than a steam engine. WIRE LINE DERRICK uses steel cable with saving of 75% of cable cost. CALF REEL works independently, always ready. Pulls 6,000 lbs. casing on single line or 35,000 lbs. with triple casing blocks.

Write for large illustrated descriptive folder, FREE. Get the facts—Write today.



Armstrong Manufacturing Company

Waterloo, Iowa, U. S. A.
1606 Houston St., Fort Worth, Texas
129 West Second, Los Angeles, Calif.
Farmington, New Mexico
30 Church St., New York City

OIL AND COAL ARE COMPARED AS FUEL

(Continued from Page 96)

Second—Less actual space required for stocking although the underwriters' regulations may increase the space required in the case of fuel oil.

Third—Burning of fuel oil is generally cleaner, which means a reduction in cost of repainting and better plant moral.

Fourth—With fuel oil, it is decidedly easier to determine the actual operating boiler efficiency; the amount of stock on hand, the precentage of waste material in the stock. In other words, in burning fuel oil there is an undoubted advantage in knowing at all times the accurate cost of same, while with the burning of coal, fires in the stock pile, the banking or boilers, the variation in ash content, B. T. U. obtainable, creates many uncertainties.

Fifth—In the burning of fuel oil, the cost of handling is reduced, labor for firing is reduced and there is a saving in the elimination of ash disposal; also generally speaking the cost of boiler and auxillaries repairs are lower.

Sixth—Efficiencies are maintained at higher overloads and also efficiences are higher in that it is a relatively easier matter with a good oil installation to maintain 75 per cent to 80 per cent efficiency while even with a Pool 1 coal, 75 efficiency is very good. We would estimate that the average efficiency in coal burning is from 60 per cent to 65 per cent, while the average efficiency of oil is 5 per cent to 10 per cent higher.

Coal Over Fuel Oil

First—There is more stability in price, production and deliveries and this will most likely be particularly true over the next three years in view of the signing of a three-year agreement between the coal miners' union and coal operators, which would eliminate any general strike, and also on account of the fact that the car equipment of the railroads is in good shape which will materially reduce car shortage. On the other hand, in the case of oil, the production is dependent entirely upon a gamble in the first place, for although geologists have reduced the chance and probability of striking oil from 30 to 1 to 10 to 1, it can be readily seen that the odds are against the wildcatter. Increased storage in fuel oil is the only possible cure for the very wide variation in prices over very short periods. This would allow the oil companies to make longer contracts at guaranteed prices and guaranteed deliveries, but this increase of storage to this extent would be very expensive.

Second—There is less fire risk in the case of coal; therefore, lower insurance rates.

Third—The storage of coal is more flexible than in the case of oil as the cost of the storage of oil is very expensive and therefore kept at a minimum. This necessitates much more careful watching and prohibits stocking up against an increase in prices.

Fourth — The cost of installation of equipment together with proper fire protection in the case of small plants is in favor of coal.

The above analysis of the advantages and disadvantages of coal and fuel oil do not take into consideration powdered coal which to date is in the embryo stage but as per advice from the eminent engineers appears to have a great future on account of the possibility of burning with complete satisfaction and at low cost most grades of coal.

Price Situation

In analyzing the price situation relative to coal and fuel oil with particular reference to the eastern center of this country, we are offering the following ideas which are according to our belief of the general situation:

First—Fuel oil prices at present are high, while coal prices are low.

Second—Fuel oil prices will most likely be on the decline unless wage conditions are changed.

Third—A change from coal to oil should not be made without first obtaining a contract from a reputable oil company with a saving sufficient to amortize the cost of changing the equipment in a period of not over two years.

Fourth — A change from oil to coal should not be made without obtaining a contract from a reputable coal company with a saving sufficient to amortize the cost of changing the equipment in a period of not over one year.

This is based upon the anticipation of increased oil production from Mexico and Venezuela.

Fifth—In contracting for oil, the contract should be without a well production clause, if possible, for the oil companies should be responsible for delivering the oil covered by the contract.

Sixth—If oil is being consumed and a contract for oil can be obtained, which will net over the period of contract a price equal or lower than it would cost to burn coal for the same period, make contract and make the period as long as possible, due to the wide fluctuations in the price of fuel oil with the corresponding possibility of heavy losses.

Seventh—Before contracting or before changing from coal to oil burning be sure to take into consideration from dollars and cents standpoint all advantages and disadvantages of coal and oil.

In conclusion, it would seem that the field for oil burning is limited and each consumer must face his own problem together with competent engineering advice, to ascertain in dollars and cents the value of the two fuels, bearing in mind that wide fluctuations in either are possible, but that the exhaustion of either commodity is not probable for many years to come.

EASTERN FIELDS

(Continued from Page 56)

the Consolidated Oil & Gas Co. has the rig completed for a test on the Walter Sponable farm. In Henry district, Clay County, the United Fuel Gas Co. has the rig completed for a test on the Decker-Jarvis farm, 1½ miles north of the company's test on the H. M. Summers farm. In Paw-Paw district, Marion County, Horner Brothers started to drill on the Mary A. Moore farm. In the same district, the Owens Bottle & Machine Co. is drilling on the Larney Moore farm. In Troy district, Gilmer County, the Carnegie Natural Gas Co. has the rig completed for a test on the E. M. Talbott farm. In Serman district, Calhoun County, the Hope Natural Gas Co. started to drill on the G. F. Davis farm.

Southwest Pennsylvania

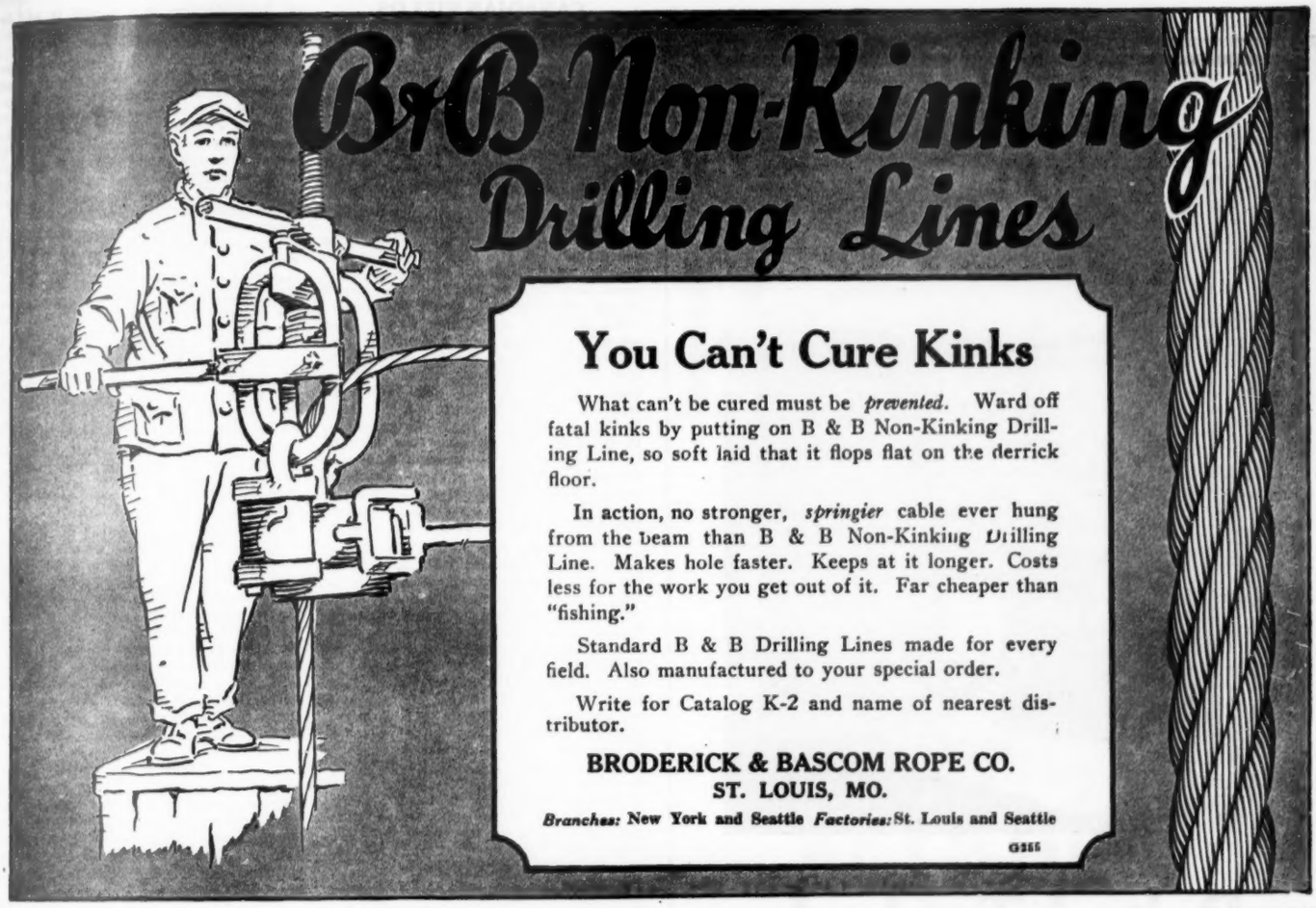
At the borough of Braden, Beaver County, Black Brothers & Co. have completed a second test on the B. F. Hicks farm not good for more than 2 bbls. a day in the 100-foot sand. In Springhill Township, Greene County, the Philadelphia Co.'s test on the David Null farm is a gasser in the Big Injun sand. In Gilmore Township, the Martin Oil & Gas Co. has a light gasser in the salt sand at a test on the Jarrett Fox farm.

More Trouble at Deep Test

Near Ligonier, Westmoreland County, the Peoples Natural Gas Co. is having more trouble at its deep test on the Seger Brothers farm. At a depth of 6,987 feet it has a crooked hole and will have to fill up with cement, which will cause some delay. The same company's second test on the Booth-Flinn property is down 6,818 feet. It is drilling in a very hard formation and not able to make more than 6 inches of hole in a day's drilling.

EXPLORING NEW MEXICO

New Mexico is being looked over carefully at present by some of the larger companies. The Texas & Pacific Coal & Oil Co. is starting out a large examining crew on the tracts of the New Mexico & Arizona Land Co., having secured an option of four months for this work. The Prairie Oil & Gas Co. is interested with the Texas & Pacific in the land which is owned largely by the rail lines crossing New Mexico and Arizona. Several officials of the Standard of Indiana, including R. S. Elison of the Midwest Refining Co. are examining northern New Mexico and mapping out the plans for developments there for the coming months.



You Can't Cure Kinks

What can't be cured must be *prevented.* Ward off fatal kinks by putting on B & B Non-Kinking Drilling Line, so soft laid that it flops flat on the derrick floor.

In action, no stronger, *springier* cable ever hung from the beam than B & B Non-Kinking Drilling Line. Makes hole faster. Keeps at it longer. Costs less for the work you get out of it. Far cheaper than "fishing."

Standard B & B Drilling Lines made for every field. Also manufactured to your special order.

Write for Catalog K-2 and name of nearest distributor.

BRODERICK & BASCOM ROPE CO.
ST. LOUIS, MO.

Branches: **New York and Seattle** ***Factories:*** **St. Louis and Seattle**

G355

Distinctively Useful Features

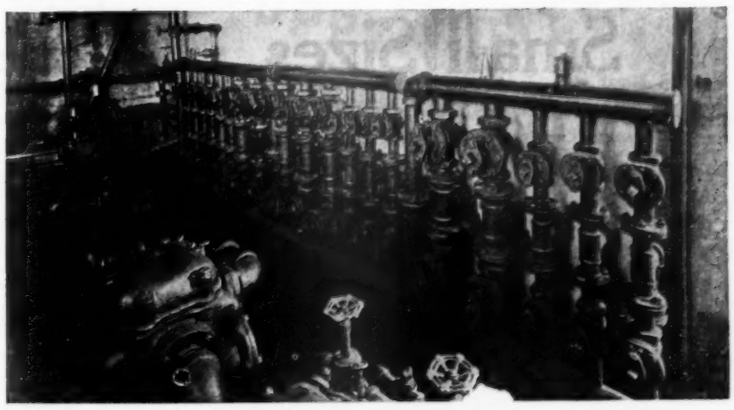
Must be possessed by a valve which is giving such universally satisfactory service in every line of industry.

The quick opening feature,—"Quarter Turn."

Straight thru passage.

The protection of the seat while pressure is passing thru.

These and many more reasons make Homestead Quarter Turn Valves favorites on such service as illustrated.



36 Homestead Valves on Pump Manifold

Write for information about Homestead Valves on Gasoline and Kerosene, Acid resisting service and the newly designed special valve for Tar lines and other high temperature service. Ask for catalog of complete line.

HOMESTEAD VALVE MFG. CO. HOMESTEAD, PENNA.

USE HOMESTEAD VALVES

MADE OF KEYSTONE COPPER STEEL

Bolted Tanks In Small Sizes

Maloney Tanks are made in sizes from 12 barrels up. 12 and 17 barrel Maloney Tanks are shown above.

Our small tanks are widely used for water storage at drilling wells, as gasoline drip tanks, and for other general purposes. They possess all of the advantages of MALONEY patented construction, will stand considerable abuse, and are easily hauled from one location to another.

Ask for our new folder giving full particulars.

MALONEY TANK MFG. CO.
Offices and Plant: Tulsa, Okla.

12 to 3,000 Barrels Inclusive

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

Prompt, Dependable Export Service

146

MALONEY
MALONEY

CANADIAN FIELDS

(Continued from Page 50)

Reynolds and associates. The Reynolds interests hold about 15,000 acres. In the Milk River district south of Magrath the MacDonald Syndicate has spudded in on the McIntyre ranch, and it is reported down more than 100 feet in hard clay formation. The outfit is running on fuel oil from the Standard Refinery at Lethbridge.

Irma-Wainwright

In the Irma-Wainwright Field, east central Alberta, the Maple Leaf Oil Co., Section 24-45-8w4 has been seriously delayed by a layer of boulders encountered in an old river bed at 30 feet depth. After this was passed, the big pipe was set on a sandstone ledge and drilling continued with a smaller hole. The test is now drilling at 470 feet. British Petroleum, Ltd., No. 3, Section 29-45-6w4, is reported drilling around 1,000 feet. British Petroleum's No. 4 is rigging up. It is stated the company has secured from the Federal Government a permit for the manufacture of carbon black from gas produced on its leases, and that if the series of wells being drilled this summer develop sufficient production, a plant will be erected.

The Anglo-Wainwright Oil & Refining Co. of Vancouver, B. C., is reported to have secured a large rotary outfit, 3,500 feet of drill stem and 3,000 feet of casing for use in this field, and is bringing in a drilling crew from the United States. The Wainwright Oil Producers Syndicate, on the Wainwright Oil & Development Co. leases, Section 36-44-7w4, is reported up and ready to spud in with a heavy standard outfit. The Wainwright Oil Development Co. shareholders recently ratified the agreement with the W. O. P. Syndicate for testing its leases, and elected Messrs. Fieldhouse, Walton, Wallace, Crampton and Horn as directors. The location is close to the town of Wainwright, and if gas is struck, it is planned to market the production there.

Western Consolidated Oil Co., Section 20-45-6w4, is reported rigged up and ready to spud in. A water well has been drilled to supply the boiler and camp. Some fairly rapid work was done getting this test ready. The heavy drilling outfit at Okotoks was dismantled, shipped to Wainwright, hauled to location and rigged up ready for work in 26 days. The British-Alberta Petroleum Syndicate. Ltd., with office at London, England and a nominal capitalization of £30,000, is planning to carry on an extensive development campaign in the Irma-Wainwright Field, tentative arrangements having been made for the drilling of 10 tests in the coming year. The Cal Wain Oil Co. of Vancouver, B. C., is reported getting ready to drill a test.

West of Edmonton

In Alberta, the actual work started so far or definitely determined upon is confined entirely to the foothill belt. Coalspur No. 2 well, in the foothills west of Edmonton, which spudded in this spring, was at last reports drilling smoothly at 445 feet with a 20-inch hole. West Nanton, in the southern foothills, a location has been made on Rice Creek, in the Willow Creek area. Unfavorable weather conditions have held up the work of bringing in materials and the last definite reports were that the work of rigging up had not yet commenced, though the rig may be in process of erection by this time.

In the Okotoks Field, Royalite Oil Co. No. 3, Section 6-20-2w5, is working with the casing prior to deepening the hole, but it looks as though it will be impossible to carry the test deeper. No. 3 is now at 2,830 feet with a gas production of approximately 3,000,000 feet a day. Royalite No. 4, Section 7-20-2w5, which is down 3,185 feet with a production of 6,000,000 feet a day, will be drilled deeper this season.

In the Pigeon Lake district, west of Wetaskiwin, the Globe Drilling Co. has resumed work at 1,200 feet on the unfinished test of the Mutual Oil & Gas Co., Section 14-47-27w4. When the well was uncapped it showed a gas flow estimated at 1,000,000 feet a day, and it will be deepened for oil.

High Prairie

In the High Prairie district, northern Alberta, Prairie Oils, Ltd., which started work with a standard rig on the unfinished S. E. Slipper Syndicate test, is reported drilling at 1,100 feet with the casing free in the hole. The plant is running double tour, and will continue to do so till the test is finished. In the earlier drilling 600 feet of quicksand were encountered, but the drill is now working in soft shale and making rapid headway. A small gas showing has been encountered. The test was originally spotted by S. E. Slipper, formerly of the Goelogical Survey, and was operated by the Slipper Syndicate in 1919, but had to discontinue owing to lack of funds. Prairie Oil, Ltd., was organized by Toronto men, the directorate including Charles Millar, president, of Toronto; E. W. Backus of Minneapolis, and F. E. Davidson and G. R. Sproat of Toronto. The company is primarily after oil but if natural gas is encountered, a carbon black plant will be built, the company having already secured a carbon black permit. The company holds 8,836 acres of leases at High Prairie. F. H. Stover of Chatham is in charge of the drilling.

In the Peace River Field, Western Provinces Oil, Ltd., has been organized with head office at Saskatoon, Sask., to merge the interests of Victory Oils, Ltd., the Albersas Oil Co. and the Keystone Oil Co., all of Saskatoon, and operating in the Peace River district. The Victory-Albersas interests are jointly interested in an unfinished test opposite Peace River Petroleum, Ltd. The directors include A. W. Caswell, C. A. Needham, C. G. Locke, C. F. Graham and John Laycock.

Southern Alberta

In southern Alberta the Medicine Hat Petroleum Co., Section 14-11-6w4 is running double tour on its Bulls Head test, which resumed work recently. The company is equipped for a deep test, using a standard rig and starting with a 20-inch hole.

Northeast of Delia, in southern Alberta, the Prairie Natural Gas Co. is extending its shallow drilling operations. Three small gassers have already been completed, and two additional tests are being started. The gas will be utilized in the manufacture of carbon black.

In southern Alberta, the D. A. McDonald Syndicate test on the McIntyre ranch, near Magrath, is reported rigged up ready to spud in, but drilling has been held up for some days by difficult weather conditions. The test should be drilling early in July. This location is on a northwesterly line between the Kevin-Sunburst Field in Montana and the Okotoks Field in Alberta. South of Cardston, on the Montana side, the Mountain chief test, is reported down 2,500 feet and expects to encounter the Sunburst sand in another 100-feet of drilling. The drillers have just finished a bad fishing job.

Ontario Developments

In the Ontario fields, further deep drilling operations are being carried on in Kent County. In Romney Township, Kent County, Union Natural Gas Co. No. 251 is reported drilling at 700 feet on the John Shanks farm, north half Lot 184, Talbot Road. In Dover East Township, Kent County, Eugene Coste & Co. have located No. 7 deep test on the Matthew Boyle farm, Lot 17, concession 7, near Bear Line. This location is 7 miles from the nearest Dover production, and north and east of the Dover Field. Drilling equipment is now being moved in. Both tests will be drilled through the Trenton limestone to the granite.

In Romney Township, Kent County, the Glenwood Natural Gas Co. is cleaning out its well on the Hugh Shanks farm, west of Port Alma, and will drill deeper, efforts to pump from the present horizon having failed to develop satisfactory production. Southern Ontario Gas Co. deep test in Essex County, between Harrow and Arner, is reported drilling.

In Zone Township, Kent County, E. P. Rowe finished a fishing job on the

Featherstone farm, north of Thamesville and resumed drilling at about 1,700 feet.

In Dunwich Township, Elgin County, the St. Thomas Oil & Gas Co. is reported to have finished a second shallow producer on the Hatton farm, at 360 feet. The first well drilled about five weeks ago developed at 340 feet a production reported at 100 bbls. a day. The production of No. 2 is reported somewhat smaller.

Imperial Oil, Ltd., is rebuilding eight of the huge pressure stills in the upper refinery yard at its Sarnia, Ont., plant.

OKLAHOMA FIELDS

(Continued from Page 39)

same section, ran into a hole full of water at 2,846 feet so was shot with 55 quarts in sand at 1,823-61 feet and responded with only 5 bbls. The Shaffer Oil & Refining Co.'s No. 1, SE cor. NE SE, Section 17-15-11, was drilling at 665 feet.

The Clarion Oil Co. was rigging up its old well, No. 1 Lunsford, SE cor. SW, Section 16-14-11. C. W. Newman had a rig in place for No. 1 Robinson, NE cor. Section 29-14-12. Vollentine and others were drilling No. 1 Sugar, SE cor. SW NE, Section 26-15-13, at 1,300 feet. Shelton was spudding No. 1 Brown, NE cor SE, Section 28-15-13.

Murphy & Tilly abandoned No. 1 Bruner, NE cor. SW NW, Section 5-15-14, as dry at 2,500 feet. J. M. Kessler had a rig in place for No. 3 Suakeya, NE cor. SW NW, Section 11-14-13. W. R. Summerville was rigging up No. 1, SW cor. NW NE, Section 28-14-14.

O. R. Brunty shot No. 3 Gray, an old well, NW cor. SE SE, Section 17-13-13, with 60 quarts in sand at 2,240-70 feet and it produced 75 bbls. afterward.

Shaffer and others were getting 3 bbls. from No. 3 Foster, CEL SE SE, Section 6-13-15, from sand at 2,680-2,721 feet.

In Muskogee County, Vogler & Leightner spudded and shut down No. 1 Smith, NW cor. Section 30-14-16.

In Jefferson County, The Texas Co. was drilling at 640 feet in No. 1 Seay, C NE NE NE, Section 5-7s-5w.

Hewitt Field

In the Hewitt Field of Carter County, the Carter Oil Co.'s No. 33 Woodruff, SW cor. NW, Section 15-4s-2w, was plugged back from 3,725 feet to 2,493 feet and sands at 2,415-25 and 2,460-75 feet were shot through the casing. The well made 20 bbls. afterward. The Magnolia Petroleum Co.'s No. 6 Thompson, NE cor. NW SE, Section 21-4s-2w, an old well, was making 25 bbls. from broken sands at 2,299-2,332 feet. The Wolverine Oil Co.'s No. 112 Dillard, C SE NE SE, Section 21-4s-2w, was making 15 bbls. from sand at 2,936-70 feet, and No. 113 Dillard, CEL NW SE SE, same section, was good for 75 bbls. from sand at 2,020-2,470 feet. Baker & Strawn's old well, No. 5 Dillard, C NE NW, Section 22-4s-2w, was producing 50 bbls. from sand at 1,485-1,560 feet after plugging back from 1,730 feet. The Carter Oil Co. had a 10-bbl. well in No. 17 Hefner, C NE NE SW, same section, from sand at 2,300-50 feet. Max Westheimer's No. 9 Dillard, CSL SW, same section, was also a 100-bbl. producer from sand at 2,195-2,210 feet.

In Grady County, Stogner and others were rigging up a rotary for No. 1 Farwell, C SE NW NE, Section 23-5n-8w.

In northern Tillman County, the H. S. & H. Oil Corp. was spudding No. 1, NW cor. Section 11-1n-17w, at 50 feet.

FIRST CARGO SHIPPED BY SINCLAIR STILLS

HOUSTON, Tex., July 7.—The Sinclair Refining Co. has made its first cargo shipment of gasoline from light gravity crude since the installation of high pressure stills at its plant on the Houston ship channel. The cargo went out in the company's tanker Kemp consigned to the Government. It is reported it will apply on the now famous Teapot Dome contract. A second battery of 10 high pressure stills will be in operation by August 1.

South Texas refiners were allotted 275 cars of gasoline as part of an order for 1,000 cars of New Navy, and 64-66 gravity. The consignment goes abroad. The inquiry resulted in an advance of ½ cent per gallon.

During the week seven tankers loaded out from Texas City with refined and crude. Three cargoes were coastwise, one foreign and three bunkers. Nine tankers are scheduled for this week, one being for foreign consignment.

DISTILLATION METHOD BEING INVESTIGATED

BARTLESVILLE, Okla., July 7.—M. P. Youker, senior refinery engineer, attached to the United States Bureau of Mines experiment station here, is working on an investigation of distillation methods in refining petroleum, according to a recent announcement. A series of field tests have been made in many refineries to determine the efficiency of various types of conventional distillation methods operating on a commercial scale. Laboratory tests have been completed to determine the effect of reduction of pressure, the presence of steam and the rate of evaporization on fractionation.

His tests indicate that the present operation of skimming plant shells in series could be improved through the parallel or batch method utilizing a bubbling type fractionating column. The results indicate that a method of distillation consisting in vaporizing as a whole all of the products to be separated from the crude oil is theoretically preferable. The vapors are then fractionally liquefied securing the best separation.

Tests at Bartlesville using a bubbling type fractionating column, pipe still and separator, show that excellent results can be obtained through the fractional liquefaction of mixed vapors by means of the bubbling type fractionating column. In this test a 49 gravity naphtha with 397 degree end point and a 33 gravity gas oil of 419 degree initial were separated simultaneously from the heavy Bartlesville crude, no intermediate fraction being taken.

LIGHT RAINFALL HITS PACIFIC OPERATIONS

LOS ANGELES Cal., July 5.—Due to the very light rainfall during the past winter, there is not sufficient water to operate California's hydro-electric power plants at full capacity throughout the balance of the year. The State Railroad Commission has therefore ordered a cut of 25 per cent in the power consumption, and this cut is extended to all consumers. It has affected the oil industry so far as electric drilling operations and the operation of auxiliary refinery equipment are concerned. In view of the fact that the drilling campaign in the California fields is considerably smaller than it has been for the past two years, the lessened use of electrical equipment is not a serious matter as gas or steam driven machinery can be used just as well.

In the refining industry conditions are somewhat different, and a great deal of inconvenience is being experienced because of the curtailment. Electrically driven pump installations and the like cannot readily be replaced by steam driven equipment without a considerable outlay which would hardly be warranted for a power curtailment which is necessarily temporary. The California refiners are cooperating willingly and ungrudgingly with the power companies in doing their share.

MINNESOTA JOBBERS' MEETING

MINNEAPOLIS, Minn., July 5.—The next meeting of the Minnesota Petroleum Association will be held at Rochester, August 6, according to an announcement by Paul E. Hadlick, secretary. This meeting will be for the particular benefit of the jobbers in the southern part of the State.

COPPER is the anti-toxin for sheet metal rust. Properly proportioned, it puts into steel for tanks and sheet metal products a new measure of endurance and resistance to rust that cannot be attained without its help. Experience proves that

Keystone
Copper Steel
Gives Unexcelled Service and Rust-resistance
For Tanks

KEYSTONE
COPPER STEEL

The increased life of copper steel is a well established metallurgical fact. Ask your manufacturer to supply you tanks made of Keystone quality.

Keystone Copper Steel is an alloy made by the addition of a certain percentage of Copper to well-made Steel, thereby greatly increasing its lasting qualities under actual service conditions. It is unexcelled for roofing, siding and construction purposes, as well as for culverts, flumes, tanks, barrels, and all oil country uses. Sold by leading metal merchants. Send for booklet, "The Testimony of a Decade," proving its marked superiority in service.

Apollo
GALVANIZED SHEETS
Recognized as the standard of quality since 1864. APOLLO-KEYSTONE Galvanized Sheets with the copper steel alloy base are unequaled for Culverts, Flumes, Silos, Roofing, Siding, Spouting, Gutters, Cornices and all forms of exposed sheet metal work demanding superior rust resistance. Write for Apollo booklet.

Tin Plates
High grade roofing plates, carefully manufactured in all details. Also American Coke and Charcoal Bright Tin Plates.

Black
SHEET PRODUCTS
American Bessemer Steel Sheets, American Open Hearth Steel Sheets, Keystone Copper Steel Sheets, Automobile Sheets—all grades, Special Sheets for Stamping, Electrical Sheets, Stove and Range Sheets, Japanning and Enameling Stock, Steel Barrel and Keg Stock, Ceiling Sheets, Black Plate, Etc., Etc.

Manufactured by
American Sheet and Tin Plate Company
General Offices: Frick Building, Pittsburgh, Pa.

DISTRICT SALES OFFICES
Chicago Cincinnati Detroit New Orleans New York Philadelphia Pittsburgh St. Louis
Export Representatives: U. S. Steel Products Company, New York City
Pacific Coast Representatives: U. S. Steel Products Company, San Francisco, Los Angeles, Portland, Seattle

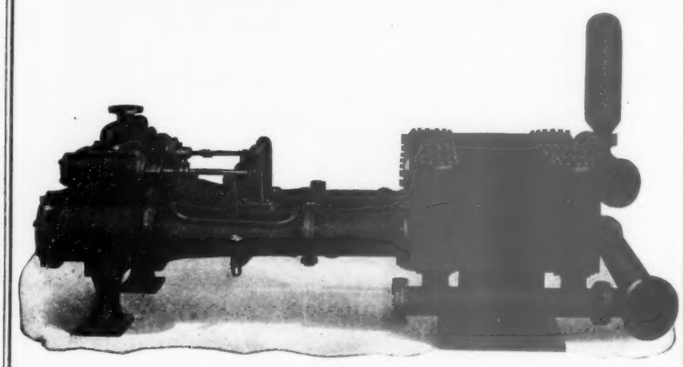
Oil Cracking

Pump for Circulation at 800° F.

Increases Capacity of Stills

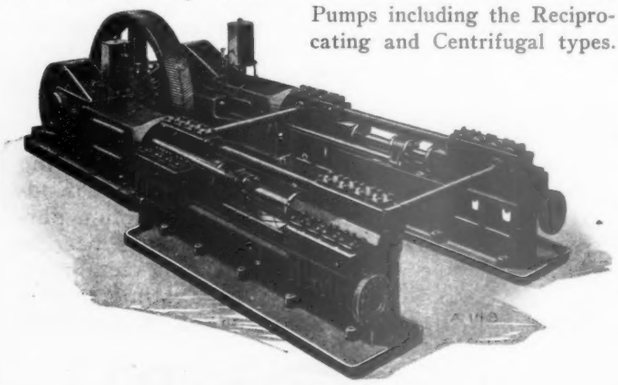
Positive circulation (including reflux) maintains even temperatures in the heating elements and high velocities reduce carbon deposit to a minimum.

Wilson-Snyder Hot Oil Pumps with Forged Steel Fluid Ends



Sixty-four of our Hot Oil Pumps are in service at one refinery—the same company has ordered 42 more—and orders have started coming from other Refiners.

Sizes developed—100 G.P.M.—200 G.P.M. and 500 G.P.M. operating on Still Pressures up to 600 pounds Pressure with a maximum differential pressure of 250 pounds per sq. in. For other Refinery Service we have furnished hundreds of Pumps including the Reciprocating and Centrifugal types.



(Oil or gasoline Engine or Motor Drive)

Gasoline Pump for Pipe Line Service

For the Refiner who transports gasoline thru Pipe Lines we have developed and have in operation pumps as illustrated above. The one shown has a capacity of 9500 bbls. per 24 hours against 800 pounds pressure per sq. in.

Complete information on our Hot Oil, Pipe Line and General Service Pumps on request.

Heavy Duty Pump Builders for 50 years.

WILSON-SNYDER

PITTSBURGH, U. S. A.

NORTH CENTRAL TEXAS

(Continued from Page 42)

Montague County—Completions: Gulf Production Co.'s No. 1 Benton, dry at 3,908 feet; Humphreys Oil Co.'s No. 1 Loy, showing 15,000,000 feet of dry gas at 585 feet.

Drilling: Boyd Oil Co.'s No. 1 Salmon, bailing at the rate of 35 bbls. in 24 hours from sand at 900 feet.

Throckmorton County—Drilling: Hale Tex Oil Co.'s No. 1 Elliott, drilling in shale at 620 feet; Houghland and others' No. 1 McKnight, spudding; Larkin and others' No. 1 Conger, drilling at 865 feet; Maer and others' No. 1 Portwood, drilling in soft rock at 1,425 feet; Whatley and others' No. 1 Todd, drilling at 580 feet; Young and others' No. 1 Reynolds, drilling in rock at 285 feet.

Carson County—Drilling: The Texas Co.'s No. 3 Burnett, flowing some oil at 3,040 feet; No. 4 Burnett, pulling 20-inch casing and repairing rig at 1,160 feet; No. 1 Mary Burnett, connecting up the boiler at 2,700 feet; No. 2 Mary Burnett, fishing for 10-inch casing at 2,725 feet; American Refining Co.'s No. 1 Burnett, drilling in rock at 2,855 feet; No. 2 Mary Burnett, fishing for roller bit at 2,400 feet; Dancinger and others' No. 1 Burnett, drilling in salt rock at 600 feet; Gulf Production Co.'s No. 4-A Burnett, drilling at 335 feet; Greenwood and others' No. 1 Burnett, drilling in red beds at 725 feet; Silk and others' No. 3 Burnett, fishing at 2,905 feet.

Gray County—Drilling: The Texas Co.'s No. 1 Sanders, collapsed casing at 2,780 feet; Holmes and others' No. 1 Morris, shut down on top of salt water sand at 3,100 feet; Wilcox Oil Co.'s No. 1 Combs, good show of oil and drilling in red shale at 2,860 feet; No. 1 Wilson, drilling at 250 feet.

Hutchinson County — Completions: Plains Oil Co.'s No. 1 Weatherly, 30 bbsl. of oil and 12,000,000 feet of gas at 2,860 feet; Watchorn Oil Co.'s No. 1-A Cable, dry at 3,505 feet.

Drilling—Coline Oil Co.'s No. 1 Sandford, pumping 80 bbls. a day at 3,220 feet; Gulf Production Co.'s No. 1 Cockrell, drilling at 240 feet; No. 1 Whittenburg, drilling at 560 feet; McGee and others' No. 1 Smith Capers, cleaning out at 3,190 feet; Prairie Oil & Gas Co.'s No. 1 Deahl, drilling at 350 feet; Tex-O-Kan Oil Co.'s No. 1 Johnson, drilling at 300 feet.

King County—Completions: Banks Oil Co.'s No. 1 Hailey, dry at 1,600 feet.

Moore County—Drilling: Producers & Refiners Oil Corp.'s No. 1 Masterson, straightening crooked hole at 1,940 feet.

Potter County—Drilling: Amarillo Oil Co.'s No. 1 Warrick is spudding; Producers & Refiners Oil Corp.'s No. 1-A Bivens, drilling by 600 feet of 6⅝-inch casing, total depth 3,262 feet; No. 2-A Bivens, fishing for bit at 2,560 feet.

Roberts County—Drilling: Big Bend Oil Co.'s No. 1 Ledrick is spudding.

Wheeler County—Drilling: Cosden and others' No. 1 George, show of oil and fishing for tools at 2,070 feet; Shedden and others' No. 1 Westmoreland, drilling in salt rock at 245 feet; Tyrell and others' No. 1 Sheldon, drilling in hard rock at 2,085 feet; Union Petroleum Co.'s No. 1 Nicholson, drilling in salt rock at 330 feet.

Coleman County—Completions: Roth and others' No. 8 Overall, dry at 1,540 feet.

Brown County—Completions: Brownwood Petroleum Co.'s No. 9 Williams, 20 bbls. at 2,485 feet; Canyon Oil & Gas Co.'s No. 2 Newton, dry at 1,335 feet; Patton and others' No. 1 Newton, 2,000,000 feet of gas at 1,485 feet.

Drilling: Anderson and others' No. 1 Wheeler, drilling at 965 feet Carlton and others' No. 1 Fombey, setting 8¼-inch casing at 1,800 feet; Honen and others' No. 2 DeBusk, drilling at 1,705 feet; Mendenhall and others' No. 1 Newton, estimated 100 bbls. a day producer at 1,300 feet.

Tarrant County—Completions: Tippett and others' No. 1 Day, dry at 3,600 feet.

Shackelford County—Drilling Humble Oil & Refining Co.'s No. 1 Miles, hole full of water and drilling at 2,570 feet; Kellogg and others' No. 1 Sedgwick, drilling in shale at 2,100 feet; Landreth Oil Co.'s No. 1 Jackson, sidereaming at 2,085 feet; Magnolia Petroleum Co.'s No. 3 George, fishing for tools at 3,490 feet; Miller and others' No. 2 Boyett, drilling in rock at 2,800 feet.

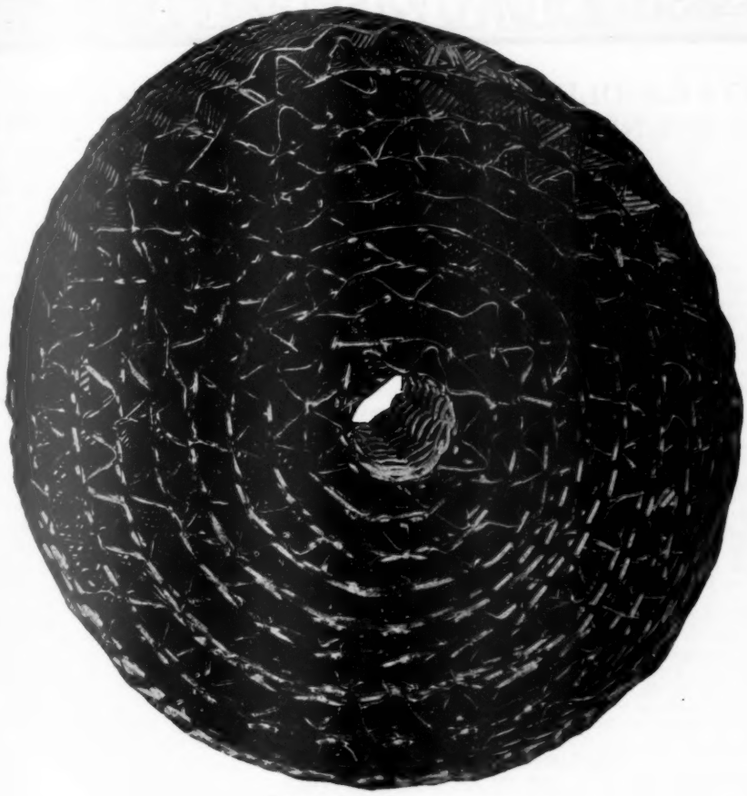
Palo Pinto County—Drilling: Phillips and others' No. 1 Caudill, showing a little oil, will shoot black lime formation at 3,585 feet; Strawn Coal Co.'s No. 1 Strawn, drilling at 900 feet.

Reagan County—Drilling: Big Lake Oil Co.'s No. 10 University, shut down for storage at 2,935 feet; No. 11 University, drilling at 1,900 feet; Dunning and others' No. 1 Sawyer, drilling in shale at 2,250 feet; Texon Land & Development Co.'s No. 1 University, fishing for three strings of tools at 3,090 feet; No. 2 University, drilling in rock at 600 feet.

PRODUCTION REPORT

Week Ending July 3, 1924

Burkburnett	
Barkley & Meadows	1,200
Humble Oil & Ref. Co.	545
Gulf Production Co.	1,065
Magnolia Petroleum Co.	3,320
McMahon Oil Co.	420
Panhandle Refining Co.	425
Prairie Oil & Gas Co.	80
Sinclair Oil & Gas Co.	80
The Texas Co.	600
Texhoma Oil & Ref. Co.	475
Miscellaneous	11,650
Total	19,810
Electra	
Empire Gas & Fuel Co.	1,400
Humble Oil & Ref. Co.	330
Griswold Oil Co.	280
Gulf Production Co.	950
Magnolia Petroleum Co.	4,300
McMahon Oil Co.	205
Panhandle Oil & Ref. Co.	135
The Texas Co.	4,540
Texhoma Oil & Ref. Co.	1,135
Miscellaneous	7,465
Total	20,730
Iowa Park, Etc.	
Griswold Oil Co.	30
Gulf Production Co.	40
Panhandle Oil & Ref. Co.	275
Texhoma Oil & Ref. Co.	85
Miscellaneous	4,215
Archer County—	
Empire Gas & Fuel Co.	1,560
Griswold Oil Co.	1,485
Gulf Production Co.	405
Humble Oil & Ref. Co.	80
Magnolia Petroleum Co.	120
Panhandle Oil & Ref. Co.	120
Prairie Oil & Gas Co.	2,355
The Texas Co.	700
Texhoma Oil & Ref. Co.	3,055
Miscellaneous	22,800
Petrolia—	
Gulf Production Co.	60
Magnolia Petroleum Co.	30
The Texas Co.	80
Miscellaneous	135
Total	37,630
Stephens County	
Empire Gas & Fuel Co.	140
Gulf Production Co.	1,510
Humble Oil & Ref. Co.	1,325
Magnolia Petroleum Co.	825
Mid-Kansas Oil & Gas Co.	2,260
Prairie Oil & Gas Co.	755
Sinclair Oil Co.	160
The Sun Co.	535
The Texas Co.	2,170
Texas Pacific Coal & Oil Co.	1,385
Miscellaneous	9,215
Total	20,280
Eastland County	
Gulf Production Co.	455
Humble Oil & Ref. Co.	165
Magnolia Petroleum Co.	540
Panhandle Oil & Ref. Co.	635
Prairie Oil & Gas Co.	700
Sinclair Oil & Gas Co.	560
The Texas Co.	400
Texas Pacific Coal & Oil Co.	930
Miscellaneous	3,080
Total	7,455
Other Fields	
Strawn—	
Texas Pacific Coal & Oil Co.	360
Miscellaneous	490
Moran—	
Empire Gas & Fuel Co.	75
Humble Oil & Ref. Co.	465
The Texas Co.	170
Texhoma Oil & Ref. Co.	190
Miscellaneous	2,890
Coleman County—	
Miscellaneous	140
Brown County—	
Miscellaneous	610
Comanche-Eastland—	
Humble Oil & Ref. Co.	220
Magnolia Petroleum Co.	1,130
Prairie Oil & Gas Co.	200
Sinclair Oil & Gas Co.	50
The Texas Co.	220
Texas Pacific Coal & Oil Co.	180
Miscellaneous	6,435
Young County—	
Gulf Production Co.	105
Sinclair Oil & Gas Co.	515
Panhandle Oil & Ref. Co.	310
The Texas Co.	65
Miscellaneous	3,520
Mitchell County	1,325
Reagan County	1,665
Jack County	30
Scurry County	15
Carson County	560
Hutchinson County	75
Total	22,610
Total this week	127,975
Total last week	126,565
Gain	1,410



Patents Pending

ANNOUNCING

A NEW

FOSTER BAFFLE

FOR ABSORPTION GASOLINE PLANTS

Retaining the efficiency and positive action of the corrugated sheet baffle but fabricated from metal lath to meet the demand for a baffle porous in all directions.

DEAN E. FOSTER & COMPANY

Consulting, Manufacturing & Operating Engineers
Specializing in Natural Gasoline Plants

Wright Building
Tulsa, Oklahoma

58

day after—day SERVICE

Republic Drilling and Powerful Pumping Belts are operating in practically every oil field in the world. In this most strenuous service which a belt can be called upon to perform they have invariably proved efficient and economical.

One of the country's largest operators tells us "We have a 10" 6 ply Stitched Republic Belt which has been in constant service for five years--day and night--There are fourteen wells on this power, yet the belt is in good condition and still on the job."

Another says, "We believe Republic to be the best stitched rubber belt in use in the oil fields today."

Because of testimony of this kind we claim with confidence the superiority of Republic Belting and ask your consideration of it.

Consult us about your belting problems.

THE REPUBLIC RUBBER COMPANY
YOUNGSTOWN, OHIO

REPUBLIC BELTING

REFINING AND MARKETING

TO PUNISH THIEVES OF NATURAL GASOLINE

The Association of Natural Gasoline Manufacturers promises drastic action against natural gasoline thieves and at a recent meeting steps were taken to punish the wrongdoers. One company reported that it had lost 100,000 gallons of gasoline, which had been stolen from its lines, covering losses over several months. Other companies reported continued losses of smaller amounts.

More stringent legislation will be necessary to break offenders of the practice, according to A. V. Bourque, secretary of the association. The present law provides that unless gasoline valued at more than $20 is stolen at one time, the offense is only a misdemeanor, punishable by a fine of not more than $25. The association hopes to get a law in Oklahoma making it grand larceny to tap a line and waste the product.

The association also is preparing publicity for the newspapers operating in the natural gasoline districts, advising residents of these areas that offenders will be punished severely. Legitimate filling station operators are being enlisted in a war upon the "bootleg" gasoline stations served entirely or in part by the gasoline secured from the thieves who tap the gasoline lines at night.

NEW REFINERY STARTS AT COLORADO, TEXAS

COLORADO, Tex., July 5.—The first 50 gallons of gasoline from the stills of the refinery of the Anderson-Prichard Oil Corp. here was purchased by Mitchell County to be used in one of the tractors pulling road grading machines now at work on the Bankhead Highway near here. The refinery was started recently on crude from the Mitchell County Feld.

The new plant was completed in 90 days and cost about $150.000. Pump station for the pipe line from the field is located on the Smart lease on the Sloan Oil Co., 14 miles west of this place. The refinery will utilize the largest part of the present output of the field.

SUIT FOR TOLEDO REFINERY

TOLEDO, Ohio, July 5.—A fight for the possession of the plant of the Maumee Oil Refining Co. here is in progress as a result of purchase of the plant by the Superoil Co. of New York City. The plant and property is valued at $500.000. E. W. Jackson, vice president and general manager for the Superoil Co. was denied possession of the property by Walter Ray, manager of the plant for the Maumee Oil Refining Co., who is in possession during a conference with officials of both companies.

TEXAS GASOLINE TAX

AUSTIN, Tex., July 5.—Six oil refining companies paid into the State treasury of Texas, $279.587.02 tax on 2.995.870 gallons sold during May, according to report of the comptroller's department. The Gulf Refining Co. led all the rest, paying $76.520 during the month. Tax by other companies were: Magnolia Petroleum Co., $58.124; The Texas Co., $56.867; Pierce Oil Corp., $25.337; Humble Oil & Refining Co., $15,071; Cities Service Oil Co., $13.357.

TIONA CO. NEW YORK OFFICE

The Tiona Petroleum Co., Philadelphia, announces it has opened an office in the Cunard Building, New York City, under the management of Miss G. Srager, for a number of years head of the paraffin department of the New York office of the Sinclair Refining Co.

SOUTH DAKOTA GASOLINE CONTEST ARGUED IN UNITED STATES COURT

SIOUX FALLS, S. D., July 7.—The right of States to sell gasoline at retail in competition with regularly established dealers, with a view to keeping down the price of this important commodity, will be determined as the result of the action pending before Judge James D. Elliott, of the United States Court in this city. The action, instituted by a North Dakota company which has a gas filling station at Claire City, S. D., seeks to have the State of South Dakota permanently enjoined from engaging in the retail gasoline business.

At the conclusion of arguments, Judge Elliott took the case under advisement, with both sides given 10 days for submission of briefs, and the plaintiff five days additional for filing an affidavit. Therefore there will be no halt in the State of South Dakota selling gasoline at retail until about the middle of July at least, Judge Elliott having refused to grant a temporary injunction pending a decision.

The proceedings in the Federal court are an outgrowth of the action of Governor W. H. McMaster on August 7, 1923, in ordering gasoline placed on sale at State stations at 16 cents per gallon, when the average price charged in South Dakota by Standard Oil and independent dealers was about 26 cents.

Competition Questioned

Whether it was actual competition by the State which cut gasoline prices following the action of the Governor last August, or whether it was publicity concerning the alleged profits of dealers, will be an important feature of the decision to be rendered by Judge Elliott. This was indicated by Judge Elliott at the conclusion of the arguments.

In their arguments against the injunction request of the Independent Home Oil Co. of North Dakota, which commenced the action, attorneys for South Dakota showed that the oil station operated by that company at Claire City, S. D., was about 90 or more miles from the one operated by the State of South Dakota at Watertown, S. D.

At the conclusion of the direct arguments Judge Elliott said the question whether or not there was competition would have to be met. He also called attention to a statement of fact by the defendant that when the gasoline "war" began the price was 25.6 cents per gallon in Sioux Falls, while a fair price, as demonstrated by the Governor, would have been 13 59 cents. If this were true, said Judge Elliott, that the oil dealers had been making a profit of 100 per cent, the plaintiff would now be coming into court with unclean hands, and should have no standing in a court of equity.

To this the attorney for the North Dakota company replied that the profits were temporarily excessive, but would have to be balanced with lesser profits and losses over a period of time. The attorney was given an opportunity to produce affidavits showing this to be true.

Power of State Challenged

In arguing for a restraining order the attorney for the North Dakota company said a fundamental question of Government is involved in the gasoline case. If the State can sell gasoline, it also would have the power of opening a meat market, or other private business, and of standardizing retail prices. Use of public money, public employes and public equipment for private business, he argued, is entirely outside the scope of the powers of the Governor and State Highway Commission. He contended that by such means the State has destroyed the valuation and profits of the Independent Home Oil Co. of North Dakota.

The attorney further pointed out there is no parallel case of the State engaging in retail business, and the courts of equity have never failed to enjoin public officials when they have gone outside their lawful powers.

"When this case is stripped of its political aspects, it is clearly seen that we have an effort on the part of officials to fix the price of a commodity," he said.

Attorneys representing the State argued that the property rights of the North Dakota company had not been invaded. They cited a number of cases where corporations have gone outside their rights as prescribed by their charters, in which restraining orders were not issued by the courts. The case of the Sing Sing penitentiary selling saws, which it manufactured, also was cited, it being stated that an attempt by a manufacturing company to obtain an injunction against this practice had failed.

It was also stated the States does not intend to go into retailing of gasoline, but that by selling at a profit of 2 cents per gallon the overhead of the State stations can be taken care of and the benefits obtained for the State highway department. It was asserted the funds of the State have not been depleted in any way as the result of the State of South Dakota selling gasoline at retail.

DRUMRIGHT MEETING OF PLANT OPERATORS

The success of the first regional plant operators' meeting held recently in the Tonkawa Field under the auspices of the Association of Natural Gasoline Manufacturers has led to a demand for other meetings in various sections of Oklahoma, and other Mid-Continent States, according to A. V. Bourque, secretary. It is probable the next regional meeting will be held at Drumright, on or about July 17, Mr. Bourque says.

The Drumright meeting will be held for the benefit of the operators of natural gasoline plants in the Drumright, Cushing, Shamrock, Yale, Quay, Oilton, Jennings, Stroud and Bristow districts. Sessions will be conducted morning, afternoon and night so the men may attend one or more meetings and keep up their work. Other meetings are being arranged for the Okmulgee and Burbank areas in Oklahoma and in several districts in north Texas.

The plant operators in the Tonkawa Field have organized a club which will have monthly meetings at which speakers on special subjects will be furnished by the association. Another direct result of the recent regional meeting there was the initial effort to build up a technical field library, fostered by R. R. Owens, superintendent of the gasoline department for the Marland Refining Co.

SMALL REFINERS FEAR CALIFORNIA TAX JUMP

LOS ANGELES, Cal., July 5.—The California State Highway Commission is seeking an increase in the tax on gasoline to 3 cents per gallon to get money for additional improvements without floating another bond issue, according to W. F. Mixson, secretary. The question is expected to go before the next session of the legislature. It is also understood the commission will seek to double the automobile license fees.

Funds from the 1919 bond issue amounting to $40.000.000 have been appropriated. Many of the small refiners in the southern section will doubtless suffer with the increased tax as they have been compelled to absorb more and more of the present tax due to the increased competition from all sources.

OKLAHOMA JOBBERS OPPOSE COUPON BOOK

OKLAHOMA CITY, Okla., July 7.—Ten per cent discount coupon books employed to encourage trade at filling stations were condemned by a unanimous vote of members present at the recent quarterly meeting in Oklahoma City of the Oklahoma Oil Jobbers Association. The association adopted a resolution asking that the issuance of coupon books be discontinued or that the rate be reduced from 10 to 2 per cent.

These books were held to be responsible for gasoline price wars in some places, gasoline dealers not employing books cutting retail prices below the net price represented in book purchases. C. M. Kinney, secretary of the association, said he regarded the situation as serious.

J. R. WELDON

Vice president Oklahoma Oil Jobbers' Association, who presided at the recent quarterly meeting of the association in Oklahoma City during the absence of L. A. Warren, president.

That the State Highway Commission has started an investigation to discover if any gasoline manufacturers or jobbers are evading the road tax was indicated when an official of the association said he had been asked by a member of the commission if there were tax evaders and if it is possible that the tax may be evaded. Officials said the commission has found that considerable gasoline is being trucked into the State from Kansas, near the northern border, and sold tax free.

"The world must be told that the oil jobber is a safe man to deal with. The oil jobber should render restrictive legislation unnecessary. I stand for the literal application of the biblical injunctions 'As ye would that men should do unto you, do ye even so unto them.'"

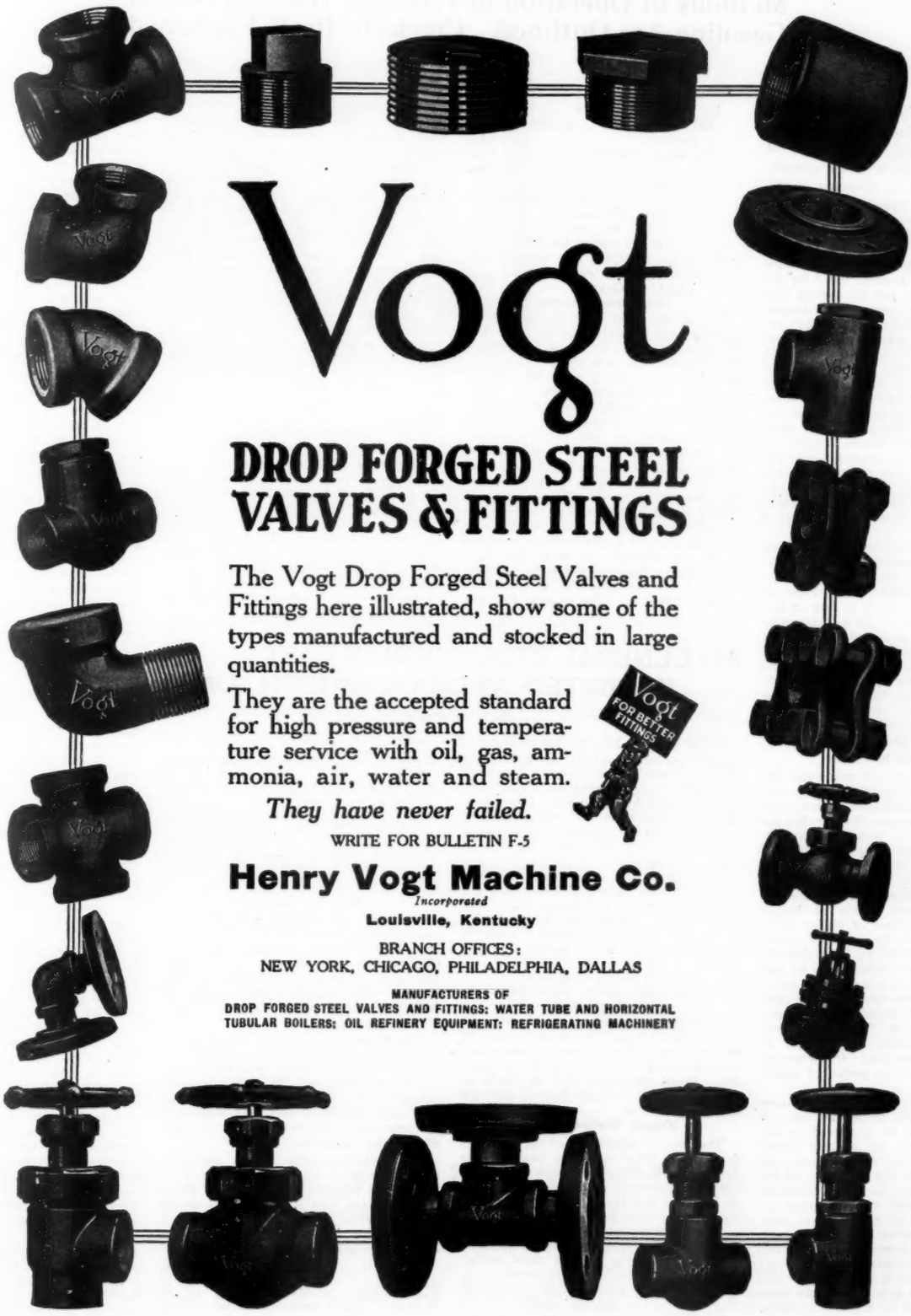
The above are quotations from a code of ethics adopted by the association at this meeting. The code was prepared by Secretary Kinney, Vice President J. R. Weldon, A. W. Lee and others. It was adopted unanimously after members said it was as perfect a code as could be made.

Reports from officials of the four group organizations showed that good work is being done and the importance of continuing and strengthening the groups was stressed.

The next quarterly meeting will be held in Tulsa in October.

WISCONSIN JOBBERS SESSION

CHICAGO, July 5.—The next meeting of the Wisconsin Independent Oil Jobbers Association is scheduled for the Plankington Hotel, Milwaukee, July 18.



Vogt

DROP FORGED STEEL VALVES & FITTINGS

The Vogt Drop Forged Steel Valves and Fittings here illustrated, show some of the types manufactured and stocked in large quantities.

They are the accepted standard for high pressure and temperature service with oil, gas, ammonia, air, water and steam.

They have never failed.

WRITE FOR BULLETIN F-5

Henry Vogt Machine Co.

Incorporated

Louisville, Kentucky

BRANCH OFFICES:
NEW YORK, CHICAGO, PHILADELPHIA, DALLAS

MANUFACTURERS OF
DROP FORGED STEEL VALVES AND FITTINGS: WATER TUBE AND HORIZONTAL TUBULAR BOILERS: OIL REFINERY EQUIPMENT: REFRIGERATING MACHINERY

Modern Cracking Process Described

Methods of Operation of Principal Ways to Obtain Gasoline Are Outlined. Cracking Itself Explained

By Hans Tropsch

The low boiling fractions of petroleum, gasoline, were at first used exclusively in explosion engines. The scarcity of this product resulting from the increase in demand resulted in Germany in the use of benzol as a substitute, a process accelerated by the war and post-war conditions. In the United States where the demand for motor fuel increased most greatly, new sources of gasoline were sought. A certain amount could be obtained from natural gas by cooling and compression and at present considerable quantities are obtained by cracking the heavier oils. The unexampled development of automotive engines which has occurred in the United States has been possible only because the fuel necessary for motive power could be extracted from its petroleum sources or from other petroleum products. The number of automobiles in the United States is given as 15,200,000 in 1923, the gasoline consumption as 23,600,000 tons and the production 20,800,000 tons. According to Egloff 28 per cent of the gasoline production in 1921 was obtained by cracking methods.

By cracking is understood the breaking down of the hydrocarbons of high molecular weight so that as a result of intermolecular rearrangement and wandering of hydrogen atoms, lower boiling hydrocarbons result. Part of the hydrocarbons lose hydrogen and condensation reactions result with the formation of high-boiling fractions also. Together with desired low-boiling fractions, products are obtained with a higher-boiling point than the original material. Numerous investigations have experimented scientifically with the cracking process.

Differences in Crude

It is known that certain crude oils can be cracked more easily than others, due to differences in composition. Olefins are less stable than the saturated paraffin hydrocarbons of equal molecular weight. Naphthenes are generally more stable than the paraffins. For instance Hexane is less resistant to the action of heat than is methylcyclopentane. Simple hydrocarbons are more stable at higher temperatures than those of higher molecular weight. According to the conditions under which cracking is carried out the molecule may be broken near its end with the formation of considerable quantities of gases or more nearly in the middle with a higher proportion of light boiling liquid products. The latter condition is brought about by the use of pressure, lower cracking temperatures and consequent increase period of cracking.

Oils obtained by cracking at ordinary temperatures contain 20-50 per cent of olefins. Olefins can be converted to saturated hydrocarbons by heating under pressure. The more modern processes attempt to minimize the formation of the extreme end products, namely, permanent gases and coke, and simultaneously to limit the amount of unsaturated products. With increasing pressure the percentage of olefins decerases until a practically constant precentage (10 per cent) is obtained at about 9 atmospheres (135 pounds per square inch). The gas space above the liquid to be cracked is important and should be at least 50 per cent of the total but less than 90 per cent of the total volume of the vessel.

Modern Cracking Processes

Other cracking processes use a catalyst like aluminum chloride or iron while iron selenide has also been recommended.

Modern cracking processes may be classified as

I. Without catalysts
  (a) Atmospheric pressure (old method).
  (b) High pressure.
    1. In the liquid phase (Burton, Bergius);
    2. In the gas phase (Greenstreet, Rittmann);
    3. In the mixed liquid-gas phase (Dubbs, Bluemner).

II. With catalysts like iron, aluminum chloride, iron selenide, etc. (McAfee, Gray).

The Burton Process

One of the most successful American processes has been the Burton. The first patent was isued in 1913 and by 1920 the Standard Oil Co. was using 800 retorts with a daily capacity of 6,000 tons of gasoline. The Burton process is a pressure process. Earlier pressure cracking processes were described by Young in 1865 and Kray in 1886 for the production of illuminating oil. In the Burton process several thousand gallons of oil are heated under a gauge pressure of less than a pound at 130° C. to drive out all water and volatile fractions. The temperature is raised until the contents are under about 5 atmospheres pressure of the gas formed. At about 230°-260° the contents begin to boil and cracking starts. The temperature is gradually raised to 345° C. The vapors distilling out are condensed in a water cooled coil arranged so that the lighter fractions pass on to a storage tank, while the heavier fractions flow back for further cracking. After 50 per cent of the contents have distilled over as gasoline under pressure, the pressure is diminished so as to draw over some of the cracked products. The fire is quenched and the still liquid residue is drawn and the retort cleaned of coke. Burton claims that only saturated hydrocarbons are formed because the pressure release is put beyond the condenser so that condensation occurs under pressure, but independent investigation does not substantiate this claim. The Burton process is said to involve a fire risk, and the Standard Oil Co., it is claimed, is gradually going over to the "Tube & Tank" process, which is similar to the Dubbs process now to be described.

The Dubbs Process

In the Dubbs process the oil is heated in tubes in a heating chamber, then passes to an expansion or reaction tank which is thoroughly insulated to prevent loss of heat. The vapors pass up a fractionating column down which crude oil is forced by a pump. The heavier fractions condense and mix with the crude oil and the mixture is sent back to the heating coils to be reworked. The lighter fractions which are not condensed by the crude oil are condensed in a water cooled condenser. The temperature of the heating chamber reaches 370°. Cracking and condensation occurs under a pressure of 8 to 11 atmospheres and the pressure distillate is claimed to be 60 to 90 per cent of the crude oil, depending on its nature. The residue averages 30 per cent, the coke 3 to 4 per cent. Uncondensible gases are recovered, and 36 to 52 per cent of the crude oil is obtained as gasoline from the pressure distillate and yields up to 60 per cent are said to be obtainable. Advantages claimed are the small quantity of oil in the system at any one time of which only one-third is in the direct heated tubes, thus decreasing the fire risk.

The Bluemner Process

The Bluemner process is a German process said to be applicable to tars as well as crude petroleum. The oil to be cracked is mixed with the heavier fractions of the cracked oil which is then forced as a spray into autoclaves containing melted lead at 450 to 500° C. The reaction product, oil, gas and vapor passes into a sperator where the high boiling oils and asphalts separate and are drawn off. The lighter oils and gasoline pass through a high temperature condenser where only the heavier fractions separate out and are forced back to mix with the incoming crude oil. The lighter oils are then condensed in a heat exchanger. The uncondensible gases are used to heat the autoclaves. Yields are claimed to be 70 per cent of the crude oil as gasoline.

The Bergius Process

The Bergius process has been in operation for several years at a large scale experimental plant. The cracking is done in the presence of hydrogen under high pressure. The pressure retort consists of two co-axial horizontal cylinders. The crude oil is run into the inner cylinder at 120 to 130 atmospheers pressure. In the space between the two cylinders is nitrogen under the same pressure as the hydrogen in the inner cylinder with an automatically controlled difference. The heating is done by the nitrogen which is circulated under pressure through a lead bath at 500° C. The hydrogen used is impure (80 per cent) and contains 20 per cent of methane and other hydrocarbons. The uncondensible gas produced contains only 20 per cent hydrogen and 80 per cent methane. The claim is made by the inventor that at 380 to 450° C. asphalt rich oils crack and hydrogenate simultaneously, and tend to form coke unless hydrogen is present to prevent it. An oil which under ordinary cracking produced 8 per cent coke and 14 per cent permanent gas, gave with the Bergius process no coke and 3 to 4 per cent gas. Unsaturation is actually diminished to a limiting equilibrium state. Independent investigations have not verified these claims of superiority over the usual cracking process except as to the diminuition of coking which is a substantial advantage.

The cracking industry will undoubtedly develop still further in the next few years as the demand for motor fuel continues to increase. Egloff estimates that by 1930, 50 per cent of the gasoline production of the United States will be cracked distillates and the investment in cracking plants will be $1,000,000,000. It is of course possible that the development of the automobile engine will continue along the line of adjustment to higher boiling fuels so that an appreciable portion of the petroleum and tar distillates not now suitable for motor fuels may become available.

NO GENERAL REDUCTION IN EAST EXPECTED, AS CONSUMPTION SOARS

By N. O. Fanning

NEW YORK, July 7.—The feature of the eastern refined oil markets during the past week was a further improvement in sentiment due to record consumption of gasoline and lubricating oils. Indications now are that there will be no general reduction in the gasoline tank wagon market, or, if it does come, it will be only temporary.

The lubricating oil market is firm. Inquiries from industrial consumers are increasing after a temporary lull. The motor vehicle consumption of lubricants is reported to be at a record. There is a scarcity of the better grades of lubricating oil here.

was consigned to the Vacuum Oil Co.

Wax is firm, with no price changes.

Fuel Oil Soft

A slight decrease in consumption of bunker fuel oil and increased receipts of Mexican fuel oil at Atlantic ports have brought about some softness in this market. Price reductions may be made in the near future on both fuel oil and gas oil, it is believed.

Export Market Active

The export movement of oil products from New York continues heavy. The feature during the week was a gain in bulk shipments of gasoline and kerosene to England and Italy. Kerosene exports were larger than for many weeks.

The following table shows principal exports of petroleum products from New York habor during the last three weeks:

	Week Ended		
Gasoline:	July 2	June 25	June 18
Bulk (gals.)	4,883,469	3,889,336	2,199,259
Cases	249,345	239,111	.....
Kerosene:			
Bulk (gals.)	5,517,824	171,731	3,212,784
Cases	296,398	445,368	1,300
Barrels	.....	2,384	.....
Fuel oil:			
Bulk (gals.)	.....	881,264	.....
Gas oil:			
Bulk (gals.)	.....	3,409,157	.....
Lubricating oil:			
Bulk (gals.)	.....	793,505	1,121,143
Barrels	6,456	29,331	14,770
Cases	46,569	18,989	12,055
Lub. grease:			
Barrels	4,600	.....	1,241
Cases	1,137	.....	.....
Paraffin wax:			
Pounds	369,600	972,840	231,000
Barrels	.....	3,595	1,512
Petroleum asphalt:			
Barrels	1,800	.....	.....
Crude oil:			
Barrels	.....	2,749	993

The export movement to Australia was large for the second week in succession. Shipments consisted of 79,998 cases of kerosene, 147,650 cases of gasoline and 17,345 cases of lubricating oil.

June Oil Receipts

June oil receipts at Atlantic ports established a record for the year, totaling 17,336,000 bbls., a daily average of 571,000 bbls., according to an estimate based on capacity of arriving oil-laden vessels. This compares with a total of 16,787,000 bbls., a daily average of 542,000 bbls., in May.

The feature was a new record in receipts from Gulf Coast ports, which contributed 9,194,000 bbls., or a daily average of 302,000 bbls. This daily average compares with 276,000 bbls. in May, and is a gain of 26,000 bbls. It represents an increase of 175,000 bbls. over the daily average for January.

The following table shows estimated daily average receipts of crude and refined oil at Atlantic Coast ports by water from the Gulf and Pacific Coasts of the United States, and imports, for the last three weeks; also monthly record since January 1, last, (figures in barrels):

	Week Ended		
Source:	July 2	June 25	June 18
Gulf Coast	278,000	352,000	293,000
Pacific Coast	77,000	148,000	126,000
*Imports	188,000	165,000	94,000
Total	543,000	665,000	613,000

Monthly Averages

	Gulf	Pacific	Imports	Total
June	302,000	133,000	136,000	571,000
May	276,000	122,000	144,000	542,000
April	262,000	143,000	123,000	528,000
March	201,000	137,000	130,000	468,000
February	174,000	175,000	108,000	457,000
January	127,000	159,000	79,000	365,000

*Imports largely from Mexico, but also from Trinidad and Peru.

The big time element

taken care of, here!

PART of what you sell to customers is speed in delivery. Here's the organization to give you the greatest possible speed—with low freight rates. Look at the list and locations of our refineries and branches for the answer. In addition we have our own telegraphic communication, our own pipe lines and tank cars to cut out delays. And more than 5,000 producing wells in the country's finest crude fields —so that we can absolutely control quality, can give you products exactly to specifications. A money-making combination!

Write, wire or phone your requirements:

GASOLINE—all grades.
LUBRICATING OILS—all grades. Tank cars, carloads in barrels.
CYLINDER STOCKS—600, 650, Steam refined, bright and filtered.
FUEL AND GAS OIL—all grades.
WATER WHITE KEROSENE. Gravities 40 to 47
MINERAL SEAL OR 300 OIL

THE PURE OIL COMPANY

General Offices: COLUMBUS, OHIO

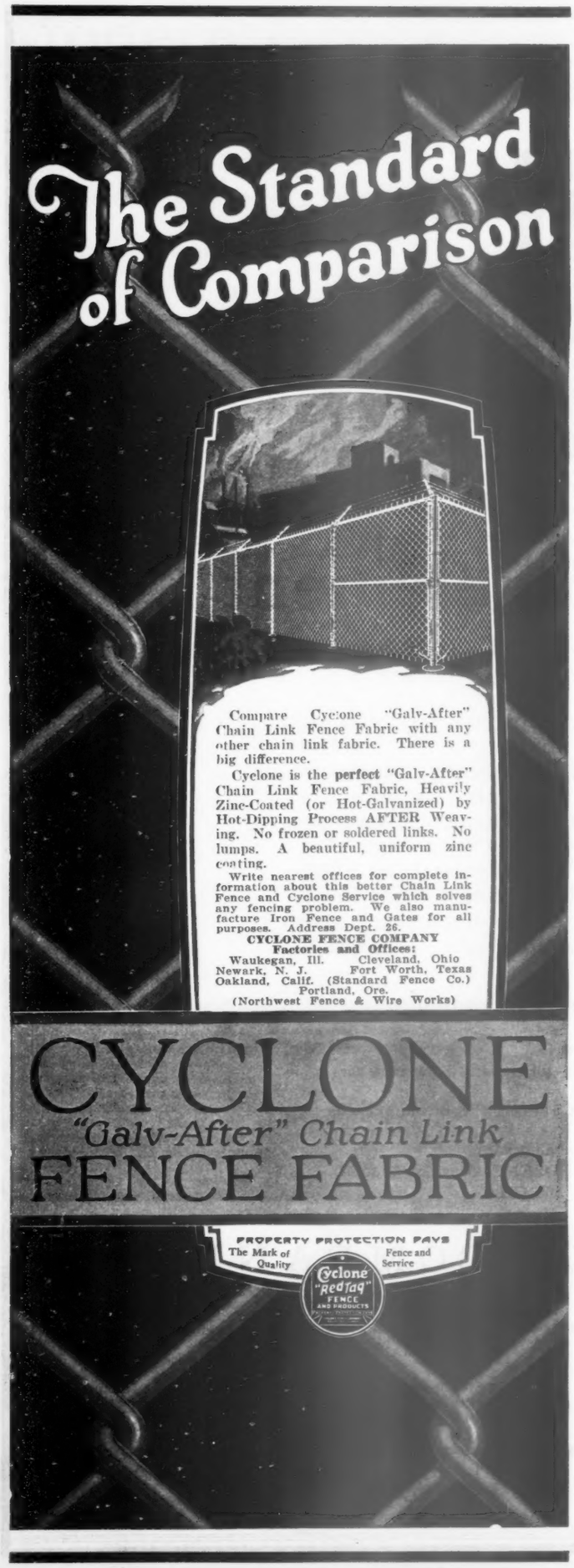
Independent—successful, through unvarying high quality in all products

REFINERIES AT

Marcus Hook, Pa.
Warren, Pa.
Heath, Ohio
Cabin Creek Jct., W. Va.
Minneapolis, Minn.
Cushing, Okla.
Muskogee, Okla.
Ardmore, Okla.
Smith's Bluff, Tex.

BRANCH OFFICES AT

Chicago
Philadelphia
Dallas
New York
Minneapolis
Pittsburgh
Tulsa, Okla.
Charleston, W. Va.
Warren, Pa.


The Standard of Comparison
Compare Cyclone "Galv-After" Chain Link Fence Fabric with any other chain link fabric. There is a big difference.
Cyclone is the perfect "Galv-After" Chain Link Fence Fabric, Heavily Zinc-Coated (or Hot-Galvanized) by Hot-Dipping Process AFTER Weaving. No frozen or soldered links. No lumps. A beautiful, uniform zinc coating.
Write nearest offices for complete information about this better Chain Link Fence and Cyclone Service which solves any fencing problem. We also manufacture Iron Fence and Gates for all purposes. Address Dept. 26.
CYCLONE FENCE COMPANY
Factories and Offices:
Waukegan, Ill. Cleveland, Ohio
Newark, N. J. Fort Worth, Texas
Oakland, Calif. (Standard Fence Co.)
Portland, Ore.
(Northwest Fence & Wire Works)
CYCLONE
"Galv-After" Chain Link
FENCE FABRIC
PROPERTY PROTECTION PAYS
The Mark of Quality
Cyclone "Red Tag" FENCE AND PRODUCTS
Fence and Service

WEATHER UNFAVORABLE FOR AUTOISTS

Dealers in Chicago Territory Feel Lower Crude Prices Will Result From Proration and Expect Tank Wagon Reduction. Question of Marginal Contracts Again to Forefront

By John B. Waldo

CHICAGO, July 7.—While the weather man states that there were no frosts last week, the oil men say that the weather was cool enough to give the gasoline business a bad frost. The trade here has become so accustomed to blaming the small business done to the weather that they overlook other factors in the business. Among these factors against buying for the future have been the prorating of crude for one thing. The trade here simply believes that this means a lower price for crude in the early future and with a lower price for crude they expect to have the Standard adjust its tank wagon prices to the actual prices that are current in so many localities. Some believe that when the tank wagon price is declined it will be a cent or two or possibly a cent and then another cent until the market is stabilized. The bulk of the industry does not entertain any such opinion but believe that when the Standard does adjust its price scale it will be to a level where they can reasonably hope to have a settled market and meet any competition that may exist now and this means a much deeper cut than 1 or 2 cents. Many say that it will take a cut of 4 cents to restore the balance between the refinery prices and the tank wagon market.

In the older days, that is say two years ago, the trade felt pretty safe when the margin between the refinery price and the tank wagon prices was running around 6 and not over 7 cents. On this basis the present tank wagon market in Chicago would stand at 15 to 16 cents and that is the price at which gasoline is actually selling. The tank wagon price of 18 cents only applies to deliveries of less than 100 gallons while for quantities above that limit the price is nominally 15¼ cents but bootleggers are selling some oil at not over 14 cents. The trade knows this, generally regarding a decline in crude being almost certain to be followed by a decline in the tank wagon prices and they are waiting not so much for lower refinery prices although they do not expect the spot market to hold, but for the decline which a lower tank wagon level will make in the marginal contract prices.

Marginal Contracts

These marginal contracts are making a lot of trouble and will make a lot more before all is done as several suits have been started to recover what is claimed to be overpayments on contracts, the jobbers contending that there has been a general decline in the tank wagon markets since the rates have been so widely reduced in some States. The chief trouble has been so far as the territory of the Standard Oil Co. (Ind.) is concerned is in the West and Northwest. All through Iowa the Hawkeye Oil Co. has been naming low tank wagon prices according to its competitors, and in the Southwest there have been several violent disturbances, particularly at Kansas City, where nobody here seems to know what the posted prices for the tank wagon and the service station really are. At any rate these possible if not probable reductions in crude, to be followed, all feel, by a reduction in the tank wagon, have made the jobbers evidence a disinclination to buy even when the weather has been promising, if not good, more than they felt sure that they could sell.

The markets held fairly firm during the week and this is true of many refiners who have not quoted less than 9¼ cents but towards the close of the week there were marketers who offered limited quantities of gasoline at 9 cents to the jobbers. It is assumed in the trade that the amounts were limited as the refiners with any considerable volume of output have been holding for the 9-cent price as their very lowest to anybody. There may have been some of last month's contract oil in the gasoline offered and then as many of the marketers were closed over the three days, they naturally wanted to clear the decks of any oil in transit as well as get a start on next week. The demand is still very largely for the New Navy grade but more of the 56-58 gravity is being sold as well as the higher gravities and blends. It would be only natural for the jobbers with so much price cutting to buy the cheaper oil especially if they were having warmer weather locally. Natural gasoline is being quoted as decidedly firmer.

Complaints on Gasoline

A good many complaints are being received regarding the gasoline being off color. Cars are reported to have been received that were half full of rusty water, evidence of hasty shipping in the latter case as were the former of gasoline held too long in storage. The trade is rather expectant of important happenings next week and there is a number of important matters that will have more or less influence on prices that may be determined then, including the extent of the touring demand and the crude price question.

Kerosene has been moving right along and prices are practically unchanged. The little ups and downs hardly make a market change as they are usually confined to marketers who are after business at a price if necessary but the refiners are holding their prices and are firm in their views. When gasoline is moving freely there is less preasure to sell other products and this is true of kerosene right now. Few refiners are making prices for an extended period and it is the out-of-the-way concerns that are reaching for business over the month.

Distillates in Demand

Distillates are still badly wanted on contracts from September to May or over the year and the refiners have not been willing to entertain any proposition founded on the present market, which is around 3⅛ cents. Some of the larger distributors feel that they must begin to prepare for the coming fall business, now not over 60 days away, at least with the present kind of weather. Gradually the oil men are learning more and more regarding the handling of the fuel oil business for domestic burners and they say that it is a good business, if handled right. As is usually the case in a new thing, they began by underestimating the cost of doing business. The prices two winters back were not profitable and those of last winter barely so and they want more money or a lower cost. They are not likely to get the latter for the same grade of distillate. The larger burner makers are now making a drive for summer installations and are offering to not only make a low special price but supply the equipment on the basis of, in some cases, 10 per cent down and 12 months to pay the balance. Less is said regarding the cheapness of oil as compared with coal and the stress is placed where it should be on the saving in labor, the relief from ashes, dust and soot and the more even heat and above all the fact that the latest devices are entirely automatic and require no attention except to keep the tank filled with oil. Many claim to be able to operate perfectly on heavy fuel oil, but this is rather a blend of heavy oil with a distillate and some of the distributors prefer a gravity as low as 18-20 as they say that when blended it gives more heat and works just as well. Page ads in all the daily papers of a Sunday are not uncommon and evidently the "perfected oil burner" is to have a "big push this year.

Gas oil is stated to be rather hard to buy right now and some of the marketers

(Continued on Page 114)

The Cross Fuel Oil Cracking Process

You can charge residual fuel oil direct to a cracking process but you will find a big difference in the profits when you have 25% of your throughput remain in your tanks as unsalable residuum.

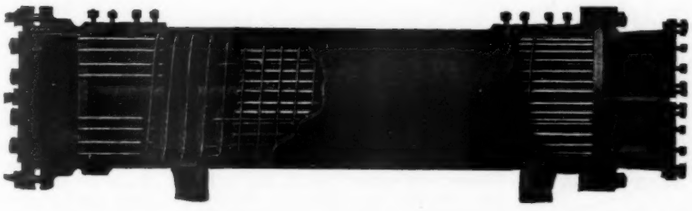
All the products from the Cross process are salable.

THE M. W. KELLOGG CO.,
No. 90 West Street
New York City

BRANCH OFFICES:

700 Baltimore Ave., Kansas City, Mo. 304 Lane Mortgage Bldg., Los Angeles, Cal.

Compact—Self-contained—Portable



The Multiwhirl Oil Cooler

is compact because of its exceptionally high rate of heat transfer.
is self-contained because every element required for its operation is enclosed in the shell and included as a unit apparatus.
is easily and quickly transported to any location as required by changes in equipment or for different operations.

—These are only 3 out of more than a dozen outstanding advantages of the Multiwhirl Oil Cooler. Send for Bulletin 910 describing this and other G-R Heat Exchangers for Oil Refineries.

THE GRISCOM-RUSSELL COMPANY
94-A West St., New York

Philadelphia, Boston, Hartford, Rochester; Pittsburgh, Cleveland, Columbus, Detroit; Chicago, Indianapolis, Milwaukee, Minneapolis; St. Louis, Kansas City, Denver, Charlotte; New Orleans, Houston, Dallas, Fort Worth; San Francisco, Los Angeles, Seattle, Salt Lake City, Toronto

SEND COUPON NOW

NAME.....
ADDRESS.....
The Griscom-Russell Co.
94-A West St., New York City
Gentlemen: Please send copy of your Bulletin No. 910 describing Multi-whirl and G-R Vaneflo Exchangers.
7-10-24
O&GJ

N. LOUISIANA-ARKANSAS

(Continued from Page 46)

at 2,563 feet in No. 2, Section 11-21-10; setting liner at 2,553 feet in No. 2 Merritt, set 6-inch at 2,500 feet in No. 3 and drilling at 1,820 feet in No. 4, Section 14-21-10; derrick up for No. 1 Lindsey, Section 22-21-10, an drigging up to drill No. 1 Crichton in Section 21-21-10.

Louisiana Wildcats

Caldwell Parish

Culver and others are temporarily closed down at 2,510 feet in No. 1 fee, Section 21-14-4, 5 miles east of Columbia.

La Salle Parish

The Burban Oil Co. set 8-inch casing at 767 feet in No. 2 Urania, Section 21-11-2, and the Urania Petroleum Co. is drilling at 60 feet in No. 4 Urania, Section 20-10-2e.

Lincoln Parish

McCaldin and others are drilling at 1,600 feet in No. 1 Hedgepeth, Section 28-20-4, half way between Homer and Ruston.

Morehouse Parish

The Amalgamated Oil Co. set 8-inch at 910 feet in No. 2 Southern, Section 53-20-4. The Carson Carbon Co. tested salt water at 2,500 feet in No. 2 Irwin, Section 20-20-5 and is waiting orders. The Humphreys Carbon Co. set 8-inch at 1,000 feet in No. 1 Spiker, Section 17-20-5, and Ladell and others have derrick up for No. 1 Feazel, Section 22-20-5.

The Natural Gas Producing Co. has derrick up for No. 12 Crossett, Section 35-21-4, and is drilling at 2,180 feet in No. 4 Snyder, Section 34-20-5, and the Southern Carbon Co. is bailing at 2,200 feet in No. 12 Spiker, Section 8-20-5.

Ouachita Parish

The Atlas Oil Co. is drilling at 4,155 feet in No. 2 West Virginia Timber Co., Section 3-18-5. The Central Carbon Co. set 16-inch casing at 2,172 feet in No. 2 Leiber, Section 4-19-5, and the Cosmos Carbon Co. set 6-inch at 2,172 feet in No. 1 fee, Section 6-19-5. Ladell and others set 6-inch casing at 2,177 feet in No. 25 fee, Section 30-19-5, and are drilling at 50 feet in No. 27 fee, in Section 33-20-5.

The Oil Field Exploration Co. is drilling at 800 feet in No. 1 Collins, Section 18-19-5; Ouachita Natural Gas Co. has derrick up for No. 3 Trezedant, Section 40-20-5, and the Palmer Corp., rigging up to drill No. 1 Grayson, Section 12-19-4 and drilling at 2,225 feet in No. 1 Leiber, Section 4-19-5.

The Southern Carbon Co. is drilling at 1,940 feet in No. 31 fee, Section 21-19-5, at 2,270 feet in No. 32 fee, Section 15-19-5, at 1,835 feet in No. 33 fee, Section 21-19-5, set 8-inch at 885 feet in No. 34 fee, Section 21-19-5, drilling at 160 feet in 35 fee Section 5-19-5, and has derrick up for No. 36 fee, Section 21-19-5.

The Standard Carbon Co. is rigging up to drill No. 1 Gayle, Section 18-19-5 and set 6-inch casing at 2,156 feet in No. 1 Perry, Section 8-19-5, and is drilling at 2,230 feet in No. 2 Vinson, Section 32-19-5; The Texas Co. is drilling at 400 feet in No. 1 Ladell, Section 2-19-5, and the West Virginia Oil & Gas Co. at 500 feet in No. 4 fee, Section 4-18-5.

Grant Parish

The Grant Parish Petroleum Co. is drilling in hard rock at 1,137 feet in No. 1 Pollock, Section 1-7-1w.

Union Parish

R. E. Allison is drilling at 1,700 feet in No. 1 Frost Johnson Lumber Co., Section 15-23-1w, the Gulf Refining Co. is drilling at 2,435 feet in No. 2 Security Trust, Section 24-23-1w.

Columbia County, Arkansas

The Amerada Petroleum Corp. is reaming to bottom of hole at 2,000 feet in No. 1 Baker-Joiner, Section 2-18-22; the Ark Oil Co. is drilling at 2,435 feet in No. 1 Ray-Fullenwider, Section 12-17-22, and the Atlantic Oil Producing Co. is drilling at 50 feet in No. 4 Murphy, Section 14-15-20.

The Gulf Refining Co. has derrick up for No. 3 W. Jones, Section 36-15-20; Magnolia Petroleum Co. set 10-inch at 120 feet in No. 1 L. Rinehart, Section 36-15-20; Neibert and others, drilling at 2,690 feet in No. 1 Barge, Section 22-18-22, and Virgil Heath, trustee, set 10-inch casing at 120 feet in No. 1 Williams, Section 1-19-21.

Arkansas Wildcats

Calhoun County, Arkansas

The Arkansas Fuel Oil Co. is drilling in rock and shale at 1,840 feet, in No. 2 Childress, Section 1-15-15.

Cleveland County, Arkansas

The Markle Syndicate tested dry with no show of oil or gas at 2,665 feet in No. 1 Plumer, Section 22-9-10.

Drew County

Graves and others tested salt water with no show of oil or gas at 2,082 feet in No. 1 Carnes, Section 10-13-6.

Grant County

The Texas Co. is rigging up to drill No. 3 Chicago Land & Timber Co., Section 18-6-13.

GULF COAST

(Continued from Page 52)

joint No. 1 Felder on the south side of the Boling Dome, in Wharton County, is below 2,140 feet.

In Fort Bend County, the Iona Oil Co. will drill several shallow formation tests with a light rotary rig. The Rycade Petroleum Co.'s No. 1 Wisdom, 7 miles southeast of Damon Mound, is starting to drill. The Gulf Coast Development Co.'s No. 3 is below 1,400 feet. The Gulf Co. and Snowden & McSweeney's No. 14 Davis, in the Big Creek Pool, is drilling and Rich and others' No. 1 Ahlers there is sidetracking.

In Matagorda County, the Gulf Production Co.'s No. 1 Caney Cattle Co.'s land is rigged to start. The Marland Oil & Refining Co. of Texas has a location at Shepherds Mound.

In the southwestern counties, the Big Gusher Oil Co.'s No. 1 Walker, southeast of the Luling Field, will be drilled deeper. In Guadalupe County, the Rycade Petroleum Co.'s No. 1 Meihofer is below 2,525 feet. The Grayburg Oil Co.'s No. 1 Weinert is at 710 feet. The Howell Brothers' No. 1 Freeman, north of Seguin, is drilling. The Walhunda Oil Co.'s No. 1 Smith is at 725 feet. The National Oil Co.'s No. 2 Hensel is idle at 2,400 feet. Barnum-Battles No. 1 Tom has started drilling.

In Gonzales County, Hindman & Mitchell spudded in No. 1 Elder. The Wade Drilling Co.'s No. 1, near Yoakum, is drilling at 670 feet.

Down in Zapata County, the Hill-Pierce Oil Co.'s No. 1 Velvas has spudded in. The Mirando Oil Co.'s No. 14 in the Mirando Pool, is drilling around 1,620 feet. In the various Webb County districts, the Associated Oil Co. is starting No. 11 Garcia, and No. 1 Webster; the Alonzo Oil Co. No. 5 Garcia and the Magnolia Petroleum Co. No. 11 Ochea pasture.

In East Texas, Coleman, Sheffield & Smith are rigging No. 1 Branch in Shelby County.

In South Louisiana, the Invincible Oil Co. has rigged No. 1 Manuel, in Evangeline Parish. The Johnson Bayou Prospecting Co. is drilling its seventh formation test in Cameron Parish. The Yount-Lee Oil Co. is starting a test near Welsh. Tests are rigging to drill west and south of the Vinton Pool.

MEXICAN FIELDS

(Continued from Page 46)

No. 31-A, drilling at 920 feet in black shale; No. 56, in gray lime at 1,660 feet; No. 59, in the same formation at 2,040 feet; No. 75, in white lime at 2,023 feet; No. 78, in gray lime at 1,770 feet; No. 79-A, in gray lime at 880 feet; Nos. 80, 11 and 88 cemented 8-inch at 1,200 feet in the San Felipe; No. 93 has commenced to make hole; No. 87, fishing at 430 feet in gray shale; No. 95, in blue shale at 450 feet. Mexican Gulf Oil Co.'s No. 23, Lot 1, is making 15,000,000 feet of gas, was 30 bbls. of oil at 1,845 feet in limestone; No. 63, same, is in the San Felipe at 1,625 feet. Mexican Sinclair Petroleum Corp.'s No. 46, Lot 2, cemented 8-inch in the San Felipe at 1,153 feet; No. 68, Lot 3, in blue shale at 932 feet; No. 69, same, in the San Felipe at 1,040 feet; No. 73, in blue shale at 770 feet. No. 91, same, in gray lime at 1,835 feet, with a showing of oil. Mexican Atlas Petroleum Corp.'s No. 4, Lot 1, is in the San Felipe at 1,225 feet. Mexican Petroleum Co.'s No. 10-A, Lot 1, is drilling in blue shale at 935 feet; No. 15, same, 1,595 feet, lime, with a showing. Transcontinental Petroleum Co.'s operations in Lot 4, Cacalilao follow: No. 7, cementing 10-inch at 1,225 feet in the San Felipe; No. 90, cemented 10-inch in same formation at 1,300 feet; No. 111, 300 feet in shale and No. 115, rigged waiting on permit. In Lot 1 No. 96 is running 8-inch at 1,360 feet in the San Felipe; No. 104 cemented 10-inch at 1,415 feet in the San Felipe. In Lot 2, No. 103 is drilling in shale at 850 feet. In the Paciencia, just north of Cacalilao, No. 106 has a fishing job at 1,790 feet in the San Felipe, showing some oil from 1,760 feet; No. 7 there cemented 10-inch at 1,250 feet in the same formation.

Other Sectors

In the other sectors of the Panuco Field drilling operations follow: Credito Petroleum Co.'s No. 2, Lot 17 Lomas y Llanos, is drilling in lime at 1,720 feet, and moving in for a test in Lot 13. Over in Tamante Credito will also drill another well, moving in now for No. 1, Lot 11. East Coast Oil Co.'s No. 214 Halcon is shut down account bad roads at 1,320 feet in a lime. This is the first suspension owing to the rains, which are now in order, fogging up the roads. No. 17, Potrero del Recreo, is a deep hole in white lime at 2,455 feet. Ita Mex Oil Co.'s No. 12, Lot 25 Tamismolon, is drilling in gray shale at 2,290 feet. Mexican Sinclair Petroleum Corp. is going back to its famous old Zurita lease, rigging now for No. 6; and also rigging up for another test in the Tananturo, No. 4. Cia Petrolera La Meridonal, inactive for several years, is drilling No. 8, Lot 6 Camalote, in a gray lime around 1,775 feet; and in Halcon No. 7, Lot 85, is rigging rotary. Vera Cruz Mexican Oil Co.'s No. 2 Buena Vista is drilling at 1,725 feet in a lime. Sol Oil Co.'s No. 2 Tanchicol (federal zone), is drilling in a hard gray shale at 1,175 feet. Williamson and others' No. 1, 3-A, Lot 4 La Canoa, passed the spudding stage, and No. 1, 3-B, same, is drilling in shale at 850 feet.

Mexican Eagle Oil Co.'s No. 34, Lot 260 Amatlan is drilling in shale and shell at 864 feet; No. 36, Lot 131 Chinampa, rick up for No. 1 R. D. Webb in Section 14-21-10.

Hude & Arnes are drilling at 2,210 feet in No. 1 W. W. Cox, Section 22-21-10. The Invincible Oil Co. is arranging to pump No. 1 A. J. Hodges, and set liner drilling in 1,260 feet in shale; No. 2 Horcones, drilling in the San Felipe at 1,880 feet carrying 6-inch; No. 26, Lot 226 Amatlan, running 6-inch at 2,180 feet, where the drill stopped in a shell. Vincent and others' No. 1, Lot 8 Tepetate, spudded in. Huasteca Petroleum Co.'s (Mexican Petroleum) No. 44 Cerro Azul, is drilling in brown lime at 1,638 feet, a corrected depth. Lindberg & Sandoval's No. 25, Lot 2 Chiconcillo, is drilling in the San Felipe at 2,251 feet, and should drill in any day. La Corona Petroleum Co.'s No. 1 San Isidro, is drilling in soft shale at 3,000 feet. Mexican Sinclair Petroleum Corp.'s No. 13, Lot 176 Amatlan, is drilling in the San Felipe at 1,958 feet.

Ebano and Miscellaneous

At Ebano, Mexican Petroleum Co.'s No. 21 Chijol is fishing at 2,460 feet in lime; No. 26, same, rigging. In La Dicha, No. 36 is drilling in gray lime at 1,375 feet; No. 37 cemented 10-inch in the same formation at 1,300 feet; No. 38, drilling in a blue lime at 1,520 feet; No. 40 cemented 8-inch at 1,510 feet in lime.

In the Marland Field, Cia. Pet. Franco Espanola, No. 8 Limon is fishing tools at 2,290 feet in a hard shale and shell; No. 16, drilling in hard blue shale at 900 feet; No. 17, running 8-inch in gray lime at 1,705 feet.

In the El Barco district, Mexican Gulf Oil Co.'s No. 37 cemented 8-inch in a gray lime at 1,191 feet; Kern Mex. Oil Fields' No. 14 Las Palmas drilling around 2,175 feet in gray lime; and No. 15 cemented 10-inch in a hard shale at 625 feet.

In the Salinas district, Mexican Gulf Oil Co.'s No. 5 set 12½-inch at 220 feet in shale; and Morrison and others' No. 12 Tortuga is drilling in shale at 825 feet. In the State of Tamaulipas, Mulcahey and others No. 1 Manuel again shut down for water at 1,960 feet in a white lime. American International Fuel Co.'s No. 11 Los Esteros is drilling in gray lime at 3,213 feet.

At Corcovado, La Corona Petroleum Co.'s No. 1, Lot 6, is ready to spud.

In the State of Nuevo Leon, Agwi Co.'s No. 21 Popote is drilling in gray lime at 1,210 feet; and not far distant Buchanan and others' No. 1 Cerro Preito is drilling in the same formation at something over 500 feet.

Mexican Notes

The Tamasopo Oil Co. has been organized here and will drill its first test in the Corcovado district where it has leases on some 2,500 acres. The holding company is the Tamasopo Petroleum Corp., organized by Pittsburgh capitalists headed by J. J. Sandford, of the Carnegie interests in that city. The organizers and directors of the Mexican subsidiary are: G. A. Weigand, B. J. Silbert, F. W. Weigand, Hoagland Foster and E. A. Weigand.

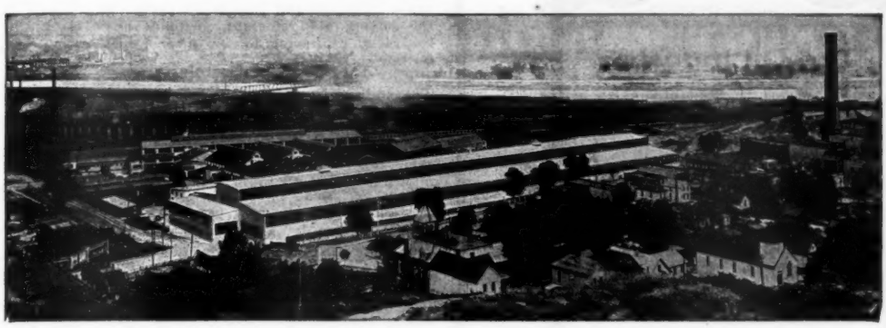
J. J. McPolan of Dallas, Tex., has arrived in Tampico to take charge of subsidiaries of the Magnolia Petroleum Co., operating in Mexico. Mr. McPolan succeeds as vice president and general manager in Mexico, Captain P. J. Blackmon, who, after some 15 years' residence in Tampico, will return to Texas. The Magnolia subsidiaries in Mexico have some little stripper production left in the South Fields, and some production in the older sectors of the Panuco district. Reduction of production in the Panuco district caused the northern fields' subsidiary to shut down its pipe line from Panuco to Tampico recently, turning to river transport to bring this oil to ocean loading terminals as it was not sufficient for economic operation of the pipe line.

DRILLING IN BRAZIL IN SEVERAL STATES

Dr. A. W. Taves, writing in Oil Engineering and France, London, says very little is known concerning the geology of Brazil from a petroleum standpoint. Wells have rarely been sunk deeper than 500 metres. Experimental drilling is now in operation in various States, petroleum having been found north, west and south of Brazil. From a hasty review of oil activities in Brazil, it appears that the sites of endeavors to obtain oil in commercial quantities in that country were chosen at localities which did not give much promise for production. Most, if not all, of the wells drilled so far have been located near seeps or asphalt deposits, so that, in fact, with depth, the bottom of the wells were farther from the reservoir rock than their dollars! Not much attention happens to have been paid to the location of wells with respect to anticlinal structure of the formations.

Newspaper notices have appeared during the past year (1923) concerning the activities of Government geologists, particularly in the State of Goyaz. For instance, on April 24, the Journal do Brazil published as follows: "The latest revelation from Goyaz is transmitted by Professor Millward, an authority upon mineralogy and geology. According to the testimony of this scientist, there exists in the municipality of Rio Verde a large basin of petroleum. It begins in the neighborhood of Chapadao on the banks of the Rio Verde River, extends through the municipalities of Rio Bonito and Jatahy, right up to the boundary of Matto Grosso in the neighborhood of the Arguaya River. This basin of petroleum is calculated ot have an area of 100 square leagues at least, and this district is already accessible by means of motor car roads, the starting point of which is the city of Minas. These roads go as far as the banks of the River Garcas, which are considered to be the largest diamond beds in Brazil.

"WRITE FOR OUR CATALOG"



The Largest and Most Modern Steel Plant in the West - -

This modern, up-to-date plant backed by a warehouse stock of Ten Thousand tons and a fabricating capacity of 5,000 tons per month assures 2nd and 3rd morning delivery to Oklahoma and Northern Texas; 5th and 6th morning delivery to Gulf Coastal Points.

Kansas City Structural Steel Company

Kansas City, U. S. A.

Tulsa, Okla. **Dallas, Texas** **Denver, Colo.**

SOMETHING NEW

"BITULUMIN" the once over, two in one paint for steel storage is none other than "BITURINE SOLUTION" provided with an aluminum finish. Why put Aluminum in "BITURINE?" Several reasons; here's one—
BITURINE SOLUTION is a brilliant black coal tar base paint, black is all right in its place, but it won't do for painting steel oil storage, black absorbs solar heat and raises the temperature in the tanks, light colors deflect solar heat and keep them cool. An Aluminum finish is over 10% more efficient than pure white in this respect.
IT'S THE BITURINE IN "BITULUMIN" that is your guarantee for permanence.

MAIL TO NEAREST OFFICE FOR INFORMATION ON "BITULUMIN"

Hill, Hubbell & Company

Technical Paints

Trade Mark

SAN FRANCISCO
115 Davis St.

TULSA
Atlas Life Bldg.

LOS ANGELES
331 W. Eleventh St.

NEW YORK
15 Moore St.

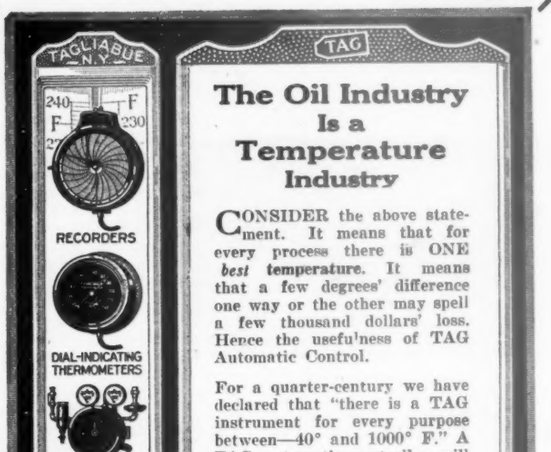
Name_____

Company_____

Address_____

Trade Mark

2,690 feet in No. 1 Barge, Section 22-18- feet; No. 73, in blue shale at 770 feet.


TAGLIABUE N.Y.
TAG
RECORDERS
DIAL-INDICATING THERMOMETERS
CONTROLLERS
OIL-TESTING INSTRUMENTS
The Oil Industry Is a Temperature Industry
CONSIDER the above statement. It means that for every process there is ONE best temperature. It means that a few degrees' difference one way or the other may spell a few thousand dollars' loss. Hence the usefulness of TAG Automatic Control.
For a quarter-century we have declared that "there is a TAG instrument for every purpose between—40° and 1000° F." A TAG automatic controller will solve your temperature problems within that wide range.
Write for Catalog G-900
C. J. TAGLIABUE MFG. CO.
18 to 88 Thirty Third St., Brooklyn N.Y.
TEMPERATURE ENGINEERS
Insist on Mercury Thermometers with the TAG-Hespe RED Reading Column
SINCE 1769

Pittsburgh Coils

"THE STANDARD OF QUALITY"

Eliminating All Leaks

A CONTINUOUS Coil, free from pipe fittings, provides the greatest assurance of freedom from leakage.

Electrically welded Pittsburgh Coils serve you well and long—by far the most satisfactory method of coil construction for oil country and refinery use.

In addition, every Pittsburgh-built Coil is given a final test under air pressure while completely submerged in water.

Send us blue print or rough sketch for quotations on Pittsburgh Coils built to your requirements.

PITTSBURGH PIPE COIL & BENDING CO.

P. O. Box 975, PITTSBURGH, PA.

WEATHER UNFAVORABLE FOR AUTOISTS IN CHICAGO

(Continued from Page 110)

are claiming that 3 cents is the bottom price. The demand here is not large, as the buyers are reluctant to place any contracts, professing to see lower prices in the early future.

Fuel oil is also moving slowly here. The industries are still waiting for a demand that they hope will keep them busy during the summer but of which they have no present assurance. The same report is made from the big steel plants to the small country factories and that is, no orders for the future but just enough to keep going on from week to week. It is hard to see why this condition prevails but it is almost universal in the manufacturing industries of the Middle West and they are doing better than some in the East, where the textile plants are hard hit. The price is fairly firm as the refiners claim that they are well sold up and are not offering freely, in fact some state when asked for offers that they are sold up for the present. Sellers here claim that at the present price of coal the best price that they can get from large consumers of fuel oil is 75 cents and that when the price is over that they lose the business to the coal man.

Lubs Unchanged

Lubricating oils are unchanged. There is some demand for motor oils from compounders right along and the trade expects a better business during July than June in motor oils, but the industrial demand is quiet and competition for the smokestack trade is very keen. Price lists are being cut to some extent but perhaps not more than usual. Still a good buyer is not allowed to escape if a small concession will land the business.

Export orders are much talked of and probably are in the market, but recently the actual buying has been small. The Carson Petroleum Co. is not believed to have filled the entire amount that it set out to buy but found that prices were getting beyond its price limit. Several refiners turned down orders at 8¾ cents, which shows the advance in the market for when the Carson Petroleum Co. began to purchase it secured its first lots at 8 and 8¼ cents. It is rumored that a new order is ready to be placed for 500 cars, but it is merely local rumor so far.

The tank wagon situation shows little change. The leading companies do not even claim that their gallonage over June was substantially larger than a year ago and some admit a small decrease. This they attribute not to any falling off in consumption, as compared with last year, but to the additional number of distributors, particularly the smaller ones. There is quite a demand for a wider differential between the tank wagon and the station prices than has ruled in the Standard of Indiana territory but many consider that this is a mistake as it would encourage the installing of more pumps, especially of curb pumps and small stations which are frequently the worst type of price cutters, as their overhead expense is so small that they can get by while a larger organization with its greater overhead has to have a better price.

Question of Margins

Locally the tank wagon price is 18 cents and the quantity price is 15¼ cents which applies to all purchases of 100 gallons or over, but some of the larger companies still claim that there is a good deal of bootlegging going on and that gasoline has been sold as low as 13½ cents to garages by these dealers who have practically no overhead. It is claimed that they buy 56-58 or off-grade Navy, but under their system they can get by with the full quality, as even at 9 cents Group 3 their cost in their truck is not over 12 cents, and they can make wages for themselves at 13½ to 14 cents. It seems to many that a period of smaller margins has come through the operations of these gentry and some fear that what has been done before will be done again and that is for the larger companies to sell at the same price from the tank wagon as from the filling station in the larger cities, which would have the effect of taking away a lot of business from the garages or obliging them to sell gasoline at cost or less. It may be remembered that several years ago, the Standard Oil Co. worked on this basis for a short time and The Texas Co., which had no distribution here except through its garage customers, made contracts with them based on the Standard's filling station price. The Texas Co. has always favored here at least a 3-cent margin to its garage customers. However, it is not expected that the change will come at an early date, although anything might happen in the gasoline business, apparently.

KANSAS FIELDS

(Continued from Page 42)

sand at 2,152-2,200 feet. Top of sand was at 2,128 feet. Rogers & Mission Oil Co.'s No. 2 Wiggins, CNL NW NW NW, Section 23-24-9, was estimated good for 150 bbls. following a 120-quart shot in sand at 2,131-92 feet. Rogers and others had a 40-bbl. well in No. 4 Cartwright, SW cor. NW, Section 6-24-10, as a result of a shot of 130 quarts in sand at 2,275-2,330 feet. The same interests were drilling at 500 feet in No. 5 Cartwright, CNL NW, same section, and at 400 feet in No. 6 Cartwright, NW cor. SW NW, same section. Dingee and others were spudding No. 1, NE cor. SW, Section 1-25-9.

J. Rogers and others were drilling at 300 feet in No. 1 Hendrickson, CEL NE SE, Section 22-24-9, and Tom Miller was spudding No. 1 Marshall, NW cor. SW NW, Section 27-24-9. The Empire Gas & Fuel Co. was drilling at 300 feet in No. 9 Teeter, C SE NE SE, Section 16-23-9.

Browning Area

In the Browning area, Rhodes & Abel were drilling at 400 feet in No. 4 Browning, C SE SW SE, Section 18-22-10. The White Eagle Oil & Refining Co. & Nelson were below 500 feet in No. 1 Browning, C NE NW NE, Section 19-22-10, and were spudding No. 2 Browning, C SE NW NE, same section. The Sinclair Oil & Gas Co. swabbed 125 bbls. from No. 2 Browning, C NW NW NW, Section 2-22-10, from sand at 2,301-35 feet during the first 24 hours and 85 bbls. in the second day. The same company's No. 4 Browning, C SW NW NW, same section, was swabbing 15 bbls. an hour from sand at 2,277-2,322 feet.

Henderson, Holden & Miller had a rig up for No. 1 M. C. Hale, C SE NW SE, Section 11-23-10. The Mid-Kansas Oil & Gas Co.'s No. 6 Martindale, CEL NE SE, Section 31-23-10, was making 250 bbls. after a 160-quart shot in sand at 2,265-2,310 feet. The same company had a rig on the ground for No. 8 Martindale, CSL SE NE SE; No. 9, SE cor. SW, was drilling at 450 feet; and No. 10, CSL SE SW, same section, was spudding.

Mateland had a rig up for No. 1 Ingersoll, SW cor. NW, Section 28-26-13. Millegan and others were drilling No. 1 Butler, SE cor. NW SE, Section 16-22-11 at 1,440 feet. Selby's No. 1 Harris, C NE NW NW, Section 19-22-11, was good for 20 bbls. after an 80-quart shot in sand at 2,055-81 feet. Elroyd and others were rigging up No. 1 Houghton, NW cor. NE NW, Section 7-22-12, and the Huston & Oklahoma Oil Co. was spudding No. 5 Sullivan, NW cor. SW SW, Section 14-24-12. N. F. Clark was drilling at 500 feet in No. 1, C NE NE, Section 7-28-11.

Hazlett and others shot No. 7 Esslinger, CSL SW, Section 34-22-13, with 140 quarts in sand at 1,795-1,826 feet and it made only 5 bbls. afterward. The Theta Oil Co.'s No. 7 Young, NW cor. NE NE, Section 10-23-13, was drilling at 650 feet, and the same company's No. 19 Young, C NW SW, same section, made 5 bbls. after shots of 10 and 20 quarts in sand at 1,828-33 feet. It topped the lime at 1,787 feet. Shaffer Oil & Refining Co.'s No. 10 Shindler, CEL NE SW NW, Section 15-23-13, was good for 300 bbls. as a result of a 120-quart shot in sand at 1,534-98 feet.

Across the line, in Coffey County, the White Eagle Oil & Refining Co. was drilling No. 1, SW cor. NE, Section 26-19-13, at 500 feet, and the Manhattan Oil Co.

had a rig in place for No. 11 Elliott, NW cor. SW, Section 14-23-13.

In Woodson County, the Empire Gas & Fuel Co. was drilling No. 4 Hester, NE cor. NW, Section 23-23-13, at 500 feet and the Cosden Oil & Gas Co. had a 30 bbls. well after a shot of 50 quarts in sand at 1,780-92 feet.

The Leonard Petroleum Co. shot its No. 2 Holverson, SW cor. Section 23-24-9, with 100 quarts in sand at 2,137-94 feet, with water sand at 2,194-99 feet and the result was 25 bbls. of oil and 100 bbls. of water.

A duster was abandoned by Rogers and others in No. 3 Cartwright, CEL NE NW, Section 6-24-10, which was plugged at 2,352 feet.

Western Greenwood

In Western Greenwood County, the Plains Petroleum Co. brought in its No. 2, SE cor. SW NE, Section 11-25-8, finding sand at 2,282-2,305 feet, and after a shot of 40 quarts it made 20 bbls.

The Magnolia Petroleum Co. abandoned its old well, No. 1 Kline, NE cor. NW SE, Section 28-26-9, as dry at 2,882 feet.

In the eastern part of the county, the Cosden Oil & Gas Co. shot its No. 8 Sullivan, NW cor. NE NE, Section 14-24-12, with 40 quarts in sand at 1,765-69 feet, and it made 6 bbls. afterward. The Huston & Oklahoma Oil Co.'s No. 3 Sullivan, SE cor. SW NW, same section, was good for 30 bbls. after a 100-quart shot in sand at 1,784-1,812 feet. The same company's No. 4 Sullivan, NE cor. SW NW, same section, made 60 bbls. when shot with 100 quarts in sand at 1,758-84 feet. The Franklin Oil Co. shot its No. 1 Johnson, SE cor. NE NE, Section 15-24-12 with 80 quarts in sand at 1,720-54 feet and the result was 50 bbls. production.

J. Phillips & Reynolds abandoned their No. 1 Christy, SW cor. NW NE, Section 4-25-11, as a failure at 2,315 feet. Rhodes and others shot their No. 5 Pees, CWL SW NE, Section 17-22-10, with 60 quarts in sand at 2,305-50 feet and it made 20 bbls. afterward. R. G. Gillespie had a 150-bbl. well in his No. 3 Browning, C NW NE NE, Section 19-22-10, from sand at 2,305-47 feet.

The Mid-Kansas Oil & Gas Co.'s No. 5 Scott, C SE SW SW, Section 23-23-10, was a 50-bbl. producer following a shot of 140 quarts in sand at 2,234-2,305 feet.

In northeastern Harvey County, Stalker and others had a rig on the ground for No. 1 Godfrey, NE cor. NW, Section 19-22-2e. F. Wahn and associates had a rig on the ground also for No. 1-A, SW cor. NE, Section 9-23-2e.

In northern Butler County, Ramsey & Haynes abandoned No. 5 Scrivner, C NW NE SW, Section 19-23-4, as a duster at 2,546 feet.

Elk County

In Elk County, Roth and others were cleaning out No. 5 Porter, CWL NW SW, Section 12-29-8 and it was estimated good for 100 bbls. following a shot of 140 quarts in sand at 2,050-90 feet. The same company's No. 6 Porter, SE cor. SW SW, same section, was also cleaning out after a shot of 160 quarts in sand at 2,007-43 feet and was estimated worth 100 bbls. The Empire Gas & Fuel Co. shot No. 1 Porter, NW cor. Section 13-29-8 in sand at 2,062-93 feet and water appeared so it may be plugged. Baxter & Mitchell abandoned No. 3 Perkins, NE NE, Section 33-29-9, as dry at 2,408 feet.

In Chautauqua County, the Jens Marie Oil Co. was drilling No. 1 Fisher, NE cor. NW, Section 33-33-9, at 615 feet.

The Mid-State Oil Co. was drilling a wildcat test in No. 1 Cunningham, NW cor. NE SE, Section 4-32-11, at 1,950 feet.

Page Brothers and others were drilling at 200 feet in No. 1 Wiggins, SW cor. SE SE, Section 33-32-10, another test for the Wilcox sand.

In Elk County, the National Refining Co.'s No. 3 Enall, C NW SE, Section 34-29-9, picked up 1,500,000 feet of gas in sand at 1,481-94 feet. The Watchorn Oil & Gas Co. shot No. 1 Tate, SE cor. SW SW, Section 3-30-9, with 40 quarts in sand at 2,270-81 feet and it made 40 bbls. afterward. J. M. Deitrich and others abandoned No. 1, C S half NW, Section 27-20-9, as dry at 2,650 feet. The Triplett Oil Co. shut down No. 1 Hopper, NE cor. Section 21-31-9, at 800 feet. The Southwestern Gas Co. abandoned the location for No. 1 Bemford, SE cor. NW, Section 36-30-11.

J. F. Denton and others found 10,000,000 feet of gas in No. 2 Denton, C NE SW, Section 34-29-9, in sand at 1,465-78 feet.

A duster was abandoned by J. E. Huff and others in No. 1 Thorp, C NE NE, Section 33-30-10 at 2,140 feet.

Cowley County

In Cowley County, the Lewis Oil Co.'s No. 2 Robins, CSL SE SW, Section 31-30-6, found gas at 2,844-50 feet good for 25,000,000 feet of gas and oil at 2,850-53 feet, making 17 bbls. an hour. C. W. Titus was spudding No. 2 Elliott, SE cor. Section 31-30-6 and the Empire Gas & Fuel Co. was rigging up No. 1-A Eastman, NW cor. Section 5-31-6. The Southwestern Petroleum Co. was rigging up No. 2 Eastman, SE cor. NE, Section 6-31-6, and Shawver & Sutter were drilling at 980 feet in No. 1 Eastman, NE cor. NW SE, same section.

In the southern part of the county, the Tidal-Osage Oil Co.'s No. 3 Smith, CSL N half NE, Section 1-35-7, made 35 bbls. after a 50-quart shot in sand at 2,337-62 feet.

Western Counties

While western counties were still the scenes of much new activity, and faith in those districts seems to be increasing if anything several location that were made in the period of excitement and wild enthusiasm have been abandoned. Lincoln, McPherson, Reno and Russell Counties shared in this desertion.

In Russell County, Proctor abandoned the location for No. 1 Brumgrodt, SE cor. NW, Section 31-12-15w. The M. M. Valerius Oil & Gas Co. was rigging up No. 1 E. Oswald, NE cor. NW, Section 17-12-15w, diagonal southwest offset to the discovery well.

In McPherson County, Benson & Benson abandoned the location for No. 1 Lindquist, NE cor. NW, Section 29-20-5w. Krown & Krown spudded No. 1 Lynn, SE cor. NW NW, Section 21-20-2w, 20 feet and shut it down. The Ramona Oil Co. was drilling No .1 Thiesson, NW cor. SW, Section 26-21-5w, at 2,500 feet, carrying a hole full of water.

In Lincoln County, Scott & Ralston had a rig on the ground for No. 1 Stone, SE cor. SW NE, Section 19-11-6w. F. L. Bailliere and others abandoned the location for No. 1 Atwell, NW cor. SE, Section 22-11-6w.

In Barton County, Streeter & Stearns were trying to sidetrack the underreamer at total depth of 2,400 feet in No. 1 Baker, NE cor. SW, Section 21-19-12w.

In Reno County, Windle and others abandoned the location for No. 1 Stevens, NW cor. NE NE, Section 10-22-8w, and also for No. 1 Griffith, SW cor. SE NE, Section 19-22-7w. Jennings-Pells and others spudded and shut down No. 1 Mohr, C SE SW SW, Section 2-25-6w.

In Rice County, S. Deeds was rigging up No. 1 Pryor, CSL NE SW NW, Section 1-19-7w.

In Clay County, Boggs and others abandoned No. 1 Bradbury, NE cor. Section 20-9-4, as dry at 1,855 feet.

In Chase County, the Hepworth Oil & Gas Co.'s No. 1, NE cor. NW, Section 33-19-9, was plugged as a failure at 1,150 feet. The Munsey Oil Co. had a rig and tools ready for No. 1 Quinn, NE cor. SE, Section 1-19-8.

REFINERY EXPLOSION

LONG BEACH, Cal., July 5.—An explosion caused a blaze which threatened to consume the entire plant. Plant operators and firemen succeeded in getting the fire under control.

ERIE RENEWS OIL CONTRACT

The Vacuum Oil Co. has renewed for two years its contract with the Erie Railroad covering requirements for lubricating oil and greases for locomotives, rolling stock and shops.

WANT—A day-and-night worker who is everlastingly at it?

POSITION WANTED

FARM FOREMAN desires a change. Have been in Mid-Continent Field for 20 years. Can go anywhere. Can handle shallow or deep production. Address, Box 127, De Noya, Okla.

WANTED — Position by experienced welder and mechanic. Have had four years' experience in pipe and refinery work. Best of reference and will go anywhere. Address Box 2, care The Oil and Gas Journal, Tulsa, Okla.

MECHANICAL ENGINEER, with broad experience in large refinery engineering, designing, building, testing and operating gasoline plants, will be open for position with responsible company about January 1. Box 800, care The Oil and Gas Journal, Tulsa, Okla.

SUPERINTENDENT of tools and production and expert fisherman, desires connection with reliable oil company; years of practical experience. Can go anywhere. Box 110, The Oil and Gas Journal, Tulsa, Okla.

LUBRICATING ENGINEER and manager retail sales, open for consideration; 10 years' experience. Address Box 900, care The Oil and Gas Journal, Tulsa Okla.

Answer the 1924 Red Cross Roll Call.

POSITION WANTED—Should you be desirous of engaging a man to supervise the operation or construction of your plant, and one who can manage an organization in a high-powered manner and get results, then I am one who can serve your purpose. Have 14 years' experience. Now supervising a plant. For personal reasons am ready for new connections. Will only consider an offer of real merits. Can furnish best of reference. If convenient, can arrange interview. Reply Box 1, care The Oil and Gas Journal, Tulsa, Okla.

FIELD MANAGER, who has had several years' experience in charge of production and drilling for large companies in the Mid-Continent and Wyoming fields, is open for a position of responsibility. Am a graduate engineer and possess references of the highest character. My experience, which has been very thorough and extensive as an executive and field manager, qualifies me to handle the operations of a private individual or the work of district superintendent. If you are in need of a man who has developed character and initiative, please address Box 803, care The Oil and Gas Journal, Tulsa, Okla.

ANSWER the biggest classified advertisement ever written—

"Buy Christmas Seals"

In so doing you will be helping a most worthy cause and spreading happiness.

The Journal has a wide circulation, going to all the oil fields, refineries, pipe line stations, gasoline plants, supply houses and business offices. It thoroughly covers the industry.

REFINERY Superintendent wishes position; 20 years' experience; have built two refineries. Address R. C., care The Oil and Gas Journal, Tulsa, Okla.

LETTERHEADS-PRINTING

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letterhead gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

I'LL TAKE THE JOB

No matter how hard you crowd the job and drive for maximum footage you can bank on me to drive the tools steadily and economically.

My notched-out sidebars is one reason why I am such a tough and husky worker for my weight—why I hang on so stubbornly, last so long, and show such worth-while reductions in footage costs.

I'll be glad to go to work for you any time you say. My name is Rex Chabelco Chain, and I come from Chain Belt Company, Milwaukee. You'll find me at the leading oil well supply houses in all fields.

STANDARDIZED DERRICKS

Patrick Yorke, acting for the American Petroleum Institute, has requested manufacturers of metallic turnbuckle and wood derricks to meet at the Statler Hotel, St. Louis, next Tuesday, for the purpose of making an effort to standardize derricks.

TULSAN DIES IN BURMAH

Word was received by the Oil Well Supply Co. of the death from black water fever of Marcus A. Byron, 36, a former Tulsa driller, in the field hospital of the Indo-Burmah Petroleum Co. in Yenangyaung oil field, in Burma. He is survived by four sisters, Mrs. J. F. Mc[illegible]ouldrick, Tulsa; Mrs. R. P. Reak, [illegible]int, Mich.; Mrs. John A. Lynch, [illegible] Green, Ohio; Mrs. John Day, [illegible]r, Pa.; five brothers, P. H. [illegible]a; Edward Byron, Denver, [illegible]mes A. Byron, Los Angeles, [illegible]f.; John B. Byron, Tulsa, and William B. Byron, Bartlesville.

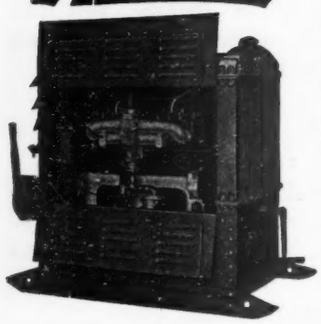
DEATH OF ELMER CHAMBERLAIN

CHATHAM, Ont., Dec. 1.—Elmer F. Chamberlain, aged 23, son of Fenton Chamberlain of S a r n i a, Ont., was drowned in Wascana Lake, near Regina, Sask., while skating. Mr. Chamberlain was head chemist at the Imperial Oil, Ltd. refinery at Regina, having been transferred from the Sarnia office a few months ago. His father has been with Imperial Oil at Sarnia many years.

EQUIPPED WITH RICARDO CYLINDER HEAD

Right: The Power Take-Off.
Below: The Industrial Unit.

Waukesha
TRADE MARK



Unless your pump and drilling machinery performance is absolutely unique, the Waukesha Industrial Unit can increase its production capacity and lower its cost as it is doing for other operators. Moreover, it **will.** Write TODAY for complete details.

Waukesha Motor Company

Engine Builders

Waukesha, Wisconsin

New York City

9493

TRADE MARK
BRISTOL'S
REG. U. S. PAT. OFFICE.

Bristol controlled refinery operations assure uniformity of output.

When a tank-car is turned down for not being in accord with specifications, many times the trouble's source can be traced back to lack of accurate temperature control in the refining operations.

The constantly growing use of BRISTOL'S recording thermometers in refineries is founded upon the conclusion of the foremost refinery engineers that in continuous accuracy, sturdiness, and freedom from maintenance annoyances, the instruments in BRISTOL'S line ideally meet the petroleum industry's requirements.

At each Bristol Office there are competent engineers always at your call in working out a proper solution of problems calling for the use of instruments for recording temperature, pressure, liquid level, vacuum, electrical units, and motion.

Command this service that has been perfected for you.

THE BRISTOL COMPANY
Waterbury, Conn.

CALIFORNIA FIELDS

(Continued from Page 50)

any success in its effort to extend the eastern limits of the Huntington Beach Field. The company's No. 1 Judd, drilling in a shell at 4,660 feet, has had no oil showing or indications of any kind to date.

Miscellaneous Drilling

The O'Donnell Refining Co.'s No. 2 Strong, being redrilled and deepened to the deep sand in the Rideout Heights section of the Whittier Field, has passed the 4,600-foot level without picking up the pay. This well is only a few locations southwest of well No. 6, which opened the field to deep drilling by getting a productive sand at 4,260 feet. The fact that No. 2 Strong is nearly 400 feet deeper and has not picked up the sand is causing no little concern and speculation. The Petroleum Midway Co.'s wells are all making good progress, although drilling is going ahead quite slowly in order that the formation may be cored. The Associated shows 1,200 feet of hole in No. 1 Gregg and the Mohawk Oil Co. 2,865 feet in No. 1 Denni. Both the Pan-American and the Taylor California Royalties are held up with fishing jobs, the former at 2,520 feet and the latter at 3,727 feet. The Standard Oil Co. is drilling by some 6-inch drill pipe at 3,032 feet with some degree of success. The Union Oil Co., following the Standard Oil Co.'s discovery of a deep zone at Coyote, is preparing to run in a string of 6¼-inch casing to test out a deep showing found in No. 55 Graham & Loftus at 4,753 feet. The showing was unusually good and if a fairly large well is secured it will probably result in the spudding in or deepening of several other wells.

The Superior Oil Co. carried its Anaheim wildcat, No. 1 Brookhurst, to 5,000 feet and decided to abandon it. The hole never gave any encouragement and the Superior's action did not prove a surprise. The Standard is drilling ahead in No. 1 Wagner at 5,408 feet, notwithstanding there have been no showings of either gas or oil. The Marland's No. 1 Anaheim is held up with a fishing job at 1,100 feet, the bottom of the hole being 3,825 feet.

At Bandini

Developments during the week at Bandini were somewhat disappointing to those looking for a new field and the prospects for a producing area are quite discouraging. The Oakridge Oil Co.'s No. 1 Kramer is drilling in a shale at 4,770 feet, a little deeper than the company's No. 1 Rossi, which caused a good deal of enthusiasm several months ago when a good showing was noted at 4,730 feet. The company has never been successful in securing a water shutoff in the latter well, notwithstanding it has been recemented several times.

In the Culver City area the Associated Oil Co.'s No. 1 Caserini, formerly the 57 Petroleum Co.'s test, has passed the 4,000-foot level and is still dry. The Mohawk Oil & Gas Co.'s test nearby has been cemented for the second time at 1,637 feet. This hole has been showing gas for some time but there is no oil present. C. C. Stahl drilled to 4,400 feet at Downey and suspended operations, due chiefly to the lack of finances. Some small showings were found at 4,262 feet but not sufficient for production. It is not believed any further work will be done on this hole unless some of the larger operators take it over and carry it down.

The Shell Oil Co. has taken over the well and holdings of the Fortuna Oil Co. at El Segundo and will proceed with the test. The Fortuna suspended drilling about two months ago at 4,560 feet.

In the Eagle Rock district the Beatty Oil Co. has run into a fishing job and it would not be surprising if the hole was abandoned at the present depth, 4,350 feet, although those in charge are still optimistic. This area has never been an oil country and it is reported the Beatty has been drilling in granite off and on for some time.

Inglewood

At Inglewood the Standard Oil Co. has reached 4,202 feet in No. 1 Los Angeles Extension 4,200 feet in No. 1 Farrel and 3,210 feet in No. 1 Potter-Smith. On the Los Angeles Investment Co.'s tract No. 1, wells Nos. 1 and 2 are suspended, while well No. 1, on tract No. 2 is drilling ahead at 2,350 feet.

The Associated Oil Co. is rigging up No. 1 McNally at La Mirada and is scheduled to spud in next week. This territory has been pretty thoroughly prospected and it is somewhat surprising the Associated has decided to do some further work. It is interesting to note also that the Standard Oil Co. is building a rig in this vicinity for No. 1 Culp Community. In this area the Burbank has drilled to 4,985 feet, the Commercial Oil & Refining Co. to 5,225 feet, Petroleum Midway to 5,035 feet and the Scientific Oil Co. to 4,215 feet. A new well has been started at Oceanside by the Pacific Coast Petroleum Corp., a community proposition, and 1,200 feet of hole has been made.

The Birch Oil Co. has suspended operations on the old Santa Monica-Sawtelle Syndicate well at Santa Monica, after drilling to 4,587 feet and plugging back to 3,800 feet. The equipment has been removed from the F. A. Black well at Wilmington and it is believed it will be abandoned at 4,886 feet. The Ring Oil Syndicate's well in Ventura County is still being bothered with salt water and it looks like another cement job will be necessary at 3,080 feet. In San Luis Obispo County, E. J. Miley's No. 1 Smith is drilling ahead at 930 feet. The General Petroleum Co., as a result of the recent discovery of a deep zone at Wheeler Ridge by the Standard Oil Co., has resumed drilling on No. 3 Gillian and will carry it to the deep sands. It is reported the Tejon Drilling Co. (W. G. McAdoo, Jr., and associates) is being refinanced and will resume drilling soon. The Standard has one drilled, No. 11, but has rigs up for Nos. 12, 13, 14, and 15 in this field. The Pan-American has made 560 feet of hole in its test on the Kern River Bluffs on Section 13-29-28. Practically all of the large operators have secured leases in the immediate vicinity.

Field Operations

Oil field operations reported to the State Oil and Gas Supervisor show 27 new wells started, compared with 23 during the previous week, a total for the current year to date of 791, compared with 770 at the same date last year. Of the 23 notices to drill filed this week four were for wells in the Torrance Field, one each in Dominguez, Coyote and Montebello fields, six in the Rosecrans district, one in San Diego County, one in Ventura County, one in San Luis Obispo County, two in Kings County, two in the Coalinga Field and seven in the fields of Kern County. There were 37 tests for water shut off made, compared with 33 during the preceding week. This brings the total of the current year to date to 865, compared with 1,015 at the same time last year. Deepening or redrilling jobs totaled 18 and abandonments 3. The following wells were started in proven areas:

Torrance

Location. Company, Well—
Consolidated Mutual Oil Co.—
19-4-13 Oakley 3.
Shell Co.—
24-4-14 Bluemle 10.
Standard Oil Co.—
19-4-13 Joughin 7.
Superior Oil Co.—
19-4-13 Torrance 44.

Rosecrans

C. C. Julian—
17-3-13 Julian 9.
General Pet. Corp.—
18-3-13 Amestoy 1.
23-11-5 Pacific Coast Pet. Corp. 1.
Ring Pet. Corp.—
20-3-13 Robertson 1.
Sentinel Oil Co.—
12-3-14 Brown 1.
Union Oil Co.—
18-3-13 Trust 1.
18-3-13 Athens 2.

Dominguez

Shell Co.—
34-3-13 Reyes 10.

Midway

36-32-23 Formax Oil Co. 16.
24-31-23 Midland Oil Fields Co., Ltd., 8.
25-31-23 Pacific Oil Co. 31.

Coyote Hills

Standard Oil Co.—
18-3-10 M-C 100.

Montebello

6- 2-11 McGinley Oil Co. 18.

Coalinga

Coalinga Lubricating Oil Co.—
2-21-14 White Creek 6.
14-20-14 Salvia Oil Co. 10.

Kern River

2-29-28 L. M. Howland 8.

EXTINGUISHED OIL FIRE WITH UNIQUE METHOD

(Continued from Page 36)

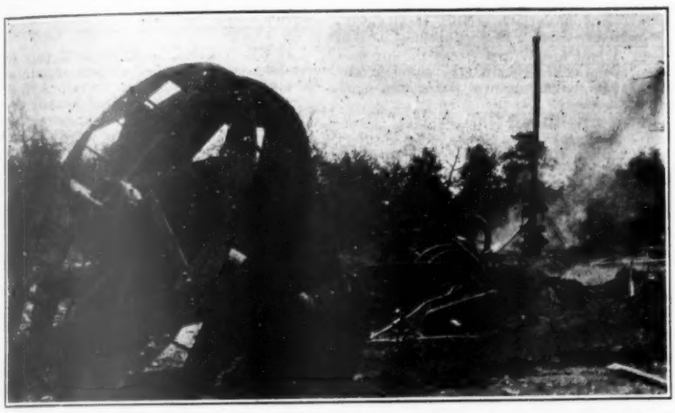
actual gauge, the remainder continuing to burn around the well.

Three more boilers were assembled, but the entire 10 still proved insufficient to cope with the scattered blaze. Another special fitting was then made on the end of a 12-inch pipe and rolled in to the well from the other side. It was constructed so as to fit snugly around the other special fitting and the lower part of the casing. This carried off about 25,000,000 feet more gas, and the remainder was extinguished by the steam, although not without considerable more difficulty.

Although the methods used required 12 days, while only two days were necessary to put out the Wilcox blaze, with a shot of gelatin, the condition of the casing on the Shaffer well was such that the shooting method was considered inadvisable. The blocking under the casing clamps had burned out, allowing the pipe to settle about 2 feet, and it was feared that the shot might jar off the collars that were supporting the string of casing, allowing it to drop and possibly plug the hole. After the fire was out and the rig rebuilt, it was found that the pipe was swinging free fully 20 feet off the bottom of the hole, so the hesitancy about using explosives was considered justified by officials of the company.

The intensity of the heat from this fire is illustrated by the fact that a string of 6⅝-inch casing lying on the ground nearby was ruined for further use by the flames, and a 250-bbl. tank located 200 feet from the well was badly damaged.

The loss was estimated at $18,000, including the material destroyed or damaged, and the extra labor necessitated, but not including the loss of gas during the 12 days. The company purchased some gas as an accommodation to its customers during the period of the fire and an estimate of that part of the loss has not yet been made.



Pictures of gas fires taken in the daytime seldom do justice to the size of the fire because of the absence of smoke. The hazy part of the above photograph of the Shaffer fire is all flame and additional fire was roaring from the top of the 8-inch casing. This was taken after the debris had been pulled away and the well had been burning for three days.

MOFFAT FIELD ACTIVE WITH EASY DRILLING

CASPER, Wyo., July 5.—The Moffat Field in Colorado is quite active. The Midwest well on the Illes Dome is waiting for cement to set. The Hogan Oil Co. is down 1,230 feet and drilling again after a short shutdown. This hole has hade shale from the top of the ground to present depth and it appears that the Moffat country is going to be easy drilling as there is shale with very few breaks, from the surface to within a few hundred feet of the sands. It may be found to be a good country for the rotaries and the Midwest is expected to start a rotary there soon.

The Hamilton Salt Creek well is drilling again after skidding the rig and abandoning the old hole and the new hole is about 200 feet deep with the 20-inch pipe set. The California Co. has a rig completed for a test about 8 miles southwest of the Moffat operation. The Yarg Oil Co. is drilling at 300 feet in shale and the Transcontinental Oil Co. is drilling at 1,300 feet. The Texas Co. has six wells drilling at shallow depths on the main Moffat structures. There are 12 wells drilling or ready to drill in the field at present.

COLOMBIA PIPE LINE FOR INTERNATIONAL CO.

NEW YORK, July 7.—Evidence that International Petroleum Co., Ltd., is planning to construct its pipe line from the De Mares Concession in Colombia to the seacoast is contained in its recent inquiry for 40,000 tons of line pipe for shipment to that country. The pipe line is to be 400 miles in length and when completed will enable crude oil to be shipped at the rate of 10,000 to 20,000 bbls. daily to the coast for export.

International Petroleum is controlled by Imperial Oil, Ltd., of Canada, which in turn is controlled by the Standard Oil Co. of New Jersey.

JAPAN HOPES FOR OIL NAVY MINISTER SAYS

Denial that the earthquake and fire in Tokio, Yokohama and Yokosuka, the Japanese naval base, last September cost the navy the major part of its oil reserves, as had been reported, was made in the lower house of the Japanese Diet by Admiral Hyo Takarabe, minister of the navy. The minister, [illegible]wering an interpellation, said the [illegible] was comparatively small.

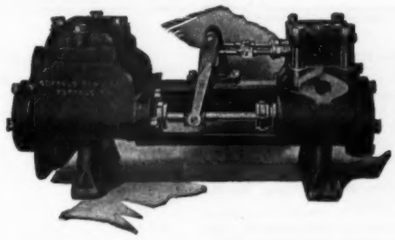
"The Government is still forming its policy, but the prospects of producing oil in Formosa and other parts of the empire are promising and considerable progress has been made to the artificial production of oil," said the admiral. "The Government is optimistic."

FIND 300-BBL. WELL ON THE RATTLESNAKE

WASHINGTON, D. C., July 7.—Information has been received at the department of the Interior that a fourth oil well drilled on the Rattlesnake structure on the Navajo Indian Reservation in New Mexico has come in with a production of about 300 bbls. per day. Three other wells have already been drilled on this structure and two are producing oil.

The lease on the Rattlesnake structure, which was made last year at a public auction sale conducted by the Bureau of Indian Affairs, is about 12 miles west of the producing lease on the Hogback structure, also in the Navajo Reservation. Oil produced from both of these structures is from the same formation and is of a very high grade. It is encountered at a depth of about 800 feet.

In stock for you near the oil fields



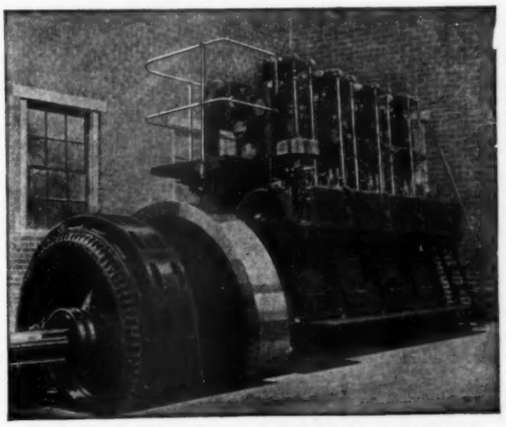
"Buffalo" Pumps

Duplex Piston Packed

are extensively used in the oil fields for thick or thin liquids, and general service up to 150 lbs. They are suitable for oil or water.

We have more to tell. Read it in our Catalog No. 911-94.

BUFFALO STEAM PUMP CO.
174 Mortimer St., Buffalo, N. Y.
Woodward, Wight & Co., New Orleans, La.
Smith, Booth, Usher Co.
Los Angeles, Calif.—San Francisco, Calif.



Vertical Diesel Oil Engine in Municipal Power Plant

DE LA VERGNE DIESEL OIL ENGINES

without air compressors

Thirty years experience in oil engine manufacture.

310,000 horse power in operation.

Send for
Bulletin No. 158—Horizontal type "DH" oil engine.
Bulletin No. 180—Horizontal type "SI" oil engine.
Bulletin No. 183—Vertical type "SI" oil engine.

De La Vergne Machine Company
920 East 138th St., New York, N. Y.
Also Manufacturers of Ice Making and Refrigerating Machines

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE—Eight 7,200 gallon tank cars, standard gauge; also five 5,000 gallon tank cars, for trolley car track; sixteen 1 ton Koppel coal charging cars for boiler rooms. Immense stocks of Pipe, Valves and Fittings in all sizes. Wire, phone or write. Tate, Fisher & Rice Co., 258 Washington St., Boston, Mass. Telephone Main 8365.

FOR SALE—Several gas engines and compressors. All makes and sizes, Electric plants, both D. C. and A. C.; four drilling machines. R. W. Russell. St. Marys, W. Va.

FOR SALE
27 Star Drilling Rig, boiler and equipment; would sell on part payment to right party. The State Bank of Rantoul, Rantoul, Kans.

FOR SALE—One No. 23 Star Drilling Machine fully equipped with necessary tools. I am offering this machine at a special price for immediate sale. L. H. Brocksmith, 1856 Menard Street, St. Louis, Missouri.

GENERAL GEAR &
MACHINE WORKS
"If It's Done in Metal, We Do It"
Gear cutting, blacksmithing, machining, welding, die making, and metal stamping.
115 South Detroit, Tulsa, Okla.

OPERATORS ATTENTION
If you want to sell your second hand casing or line pipe or if you are in the market to buy, it will pay you to get in touch with us. We are the oldest established dealers in our section of the country and we are reliable.
WESTERN
BROKERAGE & SUPPLY CO.
Eastland, Texas

TANK BOLTS

SAME-DAY SHIPMENT

⅛x¾-inch, ⅜x¾-inch, ⅜x1-inch, ⅜x1¼-inch, ½x1-inch.
Write or Wire for Quotations

STEEL MFG. & WAREHOUSE CO.

1447 Genesee St. Kansas City, Mo.

FOR IMMEDIATE SHIPMENT—Second hand line pipe and casing in A-1 condition:
10 miles of 3-inch Standard line pipe.
5 miles of 4-inch Standard line pipe.
5 miles of 6-inch Standard line pipe.
70,000 feet of 6⅝-inch 20- and 24-lb. casing.
60,000 feet of 8¼-inch 28-lb. casing.
20,000 feet of 10-inch 35- and 40-lb. casing.
5,000 feet of 12½-inch 50-lb. casing.
2,000 feet of 15½-inch 70-lb. casing.
JOSEPH DAVIS COMPANY
613 Kennedy Bldg., Tulsa, Okla.

ATTENTION!!!

OIL WELL TOOL MANUFACTURERS

We are offering, subject to prior sale:
Forged and Rough Turned
CHROME-NICKEL STEEL BARS
(S. A. E. 1035)
Sizes: Diameters 6 1/16; 8 1/16; 10 1/16 inches.
Lengths 12 ft. 8¾ in.
This is a high grade steel suitable for reforging or machining various oil well tools.
Heat numbers stamped on each bar. We have sold large quantities of this material for oil field use where it has proved highly satisfactory. Our facilities insure an adequate supply at all times.
We shall appreciate an opportunity to quote you. Let us have your inquiries.

NATIONAL FORGE & TOOL
COMPANY
Irvine (Warren County) Pa.

FOR SALE—EQUIPMENT

AIR OUTFITS — Standard, complete, new, $55 up. Vulcanizers Supply Co., No. 7 E. 14th, Kansas City, Mo.

FOR SALE—At a great bargain, a Sullivan "P" diamond core drill. It will drill to a depth of 5,000 feet. Lloyd W. Johnson, 5897 Washington Ave., St. Louis, Mo.

P. & H. TRENCH MACHINE
Cuts 24 inches to 28 inches wide by 7 feet, 6 inches deep; wheel type No. 105; has only cut ¾ mile; gasoline engine drive. Cost $13,000—1923—price $7,100 cars Indianapolis, Ind.
ROSS POWER EQUIPMENT CO.
Indianapolis, Ind.

COMPLETE Union Tool Rotary drilling rig; twin-cylinder engine; two 45-H. P. boilers; 2,400 feet of 4-inch drill stem; new Hughes rock bit; complete set fishtail bits; mud hog pump. This rig is complete and in good condition. Can be seen at Dixie Oil Co. lease, Cement, Okla.

90 HORSE POWER GAS ENGINE
4-Cylinder Bruce-Macbeth Gas Engine, in perfect running order.
It is necessary that we dispose of this and make a very low price. Has only been run five to six years.
FROST SUPERIOR FENCE
COMPANY
Warren, Ohio.

GRAY IRON CASTINGS
Inquiries for Prices
Appreciated and Promptly
Answered
LAURELTON FOUNDRY CO.
Laurelton, Pa.

FOR SALE
150 FEET 15½-inch casing; 900 feet 12½-inch, 50-round; 1,000 feet 10-inch, 40-pound; 2,700 feet 8¼-inch, 32-pound, 8-thread, J. & L. Woodlawn. Special, 3,200 feet 8¼-inch, 28-pound casing; 3,400 feet, 6¼-inch, 24-pound, 10-thread; J. & L. Woodlawn Special new thread protectors on all. J. F. Arnold Co., Decatur, Ind.

EQUIPMENT

45-H. P. boiler, 8,500-gallon steel tank, Ingersoll-Rand air compressor, Epping Carpenter pump, 9x5x10; Lucey Gumbo pump, two sets Babcock-Wilcox boilers of 267-H. P. and 350-H. P. Also small lot of pipe fittings 16-inch, 14-inch and small sizes. Address C. A. Riley, Box 703, Galveston, Texas.

LEASES—PRODUCTION

OIL ROYALTIES
On the best structures in Routt and Moffat Counties. Looked upon as one of the most important oil fields in the Country. Get in while prices are reasonable. F. W. Thomas & Co., Mount Harris, Colo.

McMULLEN and Live Oak Counties, Texas, recognized today by the leading oil men and geologists as the coming big oil field of South Texas. Choice commercial leases. Large and small tracts. Drilling contracts. Acreage in fee with all mineral rights. Bargains; easy terms. Prices advancing rapidly. Bank references furnished. Gulf Leasing Co., 525 Brady Bldg., San Antonio, Texas.

TEXAS

CARSON COUNTY—Our well, the Culbertson strikes oil and gas at 1,210 feet; first shallow record for the Panhandle; we are selling limited amount our acreage around this well; get in while prices are low—now $10 to $100; large companies have acreage about us; late contour map and weekly advice of progress free.
TEXAS-OKLAHOMA LEASE CO.
1418 Kirby Bldg., Dallas, Texas

LEASES—PRODUCTION

ALLEN COUNTY, Kentucky; for sale, 400 acres, 10-barrel settled production, 400 foot drilling, plenty locations to drill. Box 508, Bowling Green, Ky.

$5,000 HANDLES a gilt-edge acreage and development proposition. Address J. Q. P. care The Oil and Gas Journal, Tulsa, Okla.

HAVE several good drilling propositions in Allen County. This is below the shale and less than 400 foot drilling. Box 508, Bowling Green, Ky.

10c AN ACRE to $25 an acre. Texas Oil Leases. Easy terms. Get particulars. No obligations. Gulf Realty Co., 285 Bedell Bldg., San Antonio, Texas.

IF I had my Wants listed in this section they would receive the same attention that thousands are giving the good advertisements already here.

THE BIG PLAY is in Seminole where lease and royalty values increase rapidly making investment safe and profitable. Write G. R. Jordan, Wewoka, Okla.

23-BARREL old settled Indiana production for sale; finest equipped lease in the State. Pipe line statements, full data and price on request. If you are in the market for a real piece of production investigate this. Box 508, Bowling Green, Ky.

BE SURE to have your advertisement in the Semi-annual Review. It will be published on July 31. Mail your advertisement NOW so you will be absolutely sure of getting in that issue.

DRILLING CONTRACTORS
I have large block acres in Hutchinson Field, close to wells, on structure, passed by two expert geologists. I will turn block to driller or financiers who will drill well within 4 months. I want only a percentage of the oil or acreage. Write or wire
W. RAYMOND ALLEN
Hutchinson, Kansas

MARATHON FOLD AND
TEXAS PANHANDLE
LEASES in Reagan, Crockett, Pecos, Terrell, Glasscock, Sterling, Gray, Carson, Armstrong, Donley, Wheeler, Hemphill and other counties in Marathon Fold and Texas Panhandle. Lowest prices; best locations. Write for free maps and reports. P. R. MacIntosh, 215 Neil P. Anderson Bldg., Fort Worth, Texas.

FOR SALE—Shallow leases; north extension of the Casey, Illinois, Field. We will take all our pay in oil and stand part of dry hole's expense. Address W—, Box 192, Rockville, Ind.

OKLAHOMA'S
Newest oil fields
STROUD-CROMWELL-WEWOKA
Leases and royalties for sale.
Colorado, Wyoming, New Mexico leases. Production and acreage in Kentucky. W. R. Turner, 2123 Warren Ave., Chicago, Ill.

SEMI-ANNUAL REVIEW
The 1924 Semi-annual Review of the Petroleum Industry will be published July 31.
It will contain a vast wealth of expert information covering every activity of the producing, refining, marketing and exporting ends of the industry.
It will be presented in such form that the detailed facts and figures will be easily available to the reader.
Thousands of readers will refer to it constantly, thus providing an excellent advertising opportunity.
The Oil and Gas Journal has the greatest Petroleum Classified-Section in the world. It was elevated to its high position of respect because of its absolute merit in helping the men of the industry.
Producers, refiners, marketers, pipe liners and exporters study the Classified Wants Section every week. Why not place your advertisement where they can see it.
Mail your advertisement this week so that you will be absolutely sure of having your wants listed in the Semi-annual Review. It will help you.

LEASES—PRODUCTION

ROYALTIES for sale on active structures in northern Colorado. Thomas P. Corbett, 876 Fourteenth St., Boulder, Colo.

OPERATORS—The stampede is on in Montgomery County, Mississippi, world's next big high gravity oil field. Winona, Miss., mecca of oil men. Balcones Fault leases. W. C. Brooks, Memphis, Tenn.

NOTICE TO OIL MEN—320 acres of oil land to lease on the north and east line of Oklahoma County. If interested, address C. Benson, 414 East 8th St., Tulsa, Okla. Phone Cedar 4379-J.

JUST THINK! $2.80 will pay for sending a four-line advertisement all around the world, four times. A four line Classified Advertisement usually consists of 24 words and you know a great deal can be told in a few words. Mail your advertisement to the Classified Section now so that you will get in next Thursday's issue.

NEW MEXICO
Oil and gas leases, 25,000 acres; Lincoln and Roosevelt Counties; 25 cents per acre; Chaves, Lea and Eddy, 50 cents per acre. New Mexico Lease Holding Co., Box 734, Roswell, N. M.

BUY FROM Land Owner. New leases, 50-cent bonus. Production four adjoining counties. Box 458, Purcell, Okla.

OIL LEASES for sale; 12 different counties near San Antonio, Texas, 15 in Guadalupe County, mostly 40-acre blocks; or anyone interested to drill shallow oil with me. William Mendelin, 5029 Calumet Ave., Chicago, Ill.

HAVE GOVERNMENT Leases, some patented land; well on structure; 10 to 50 bbl. wells at 500 to 700 feet, 42 to 54 gravity. Also general merchandise store. Come and look it over. A. H. Spencer, Bluff, Utah, or Kayenta, Ariz.

BE SURE to have your advertisement in the Semi-annual Review. It will be published on July 31. Mail your advertisement NOW so you will be absolutely sure of getting it in that issue.

FOR SALE or lease; 100 acres in proven Cat Creek, Montana Field. Address Raymond Carlson, Deer Lodge, Mont.

FOR SALE—At bargain prices, oil and gas leases, production and royalties in the Kentucky shallow fields. For full particulars and maps, address W. P. Harley, Bowling Green, Ky.

FOR SALE—Oil and gas leases around all wildcat drilling wells in eastern Kentucky. I own several blocks, located on good structure with good prospects for oil or gas. Suitable for syndicate. George S. Engle, Ben Ali Bldg., Lexington, Ky.

OIL PRODUCTION FOR SALE
125-acre lease, Allen County, Kentucky. Eight barrels settled production in First Sand, 200 feet deep. There are two deeper sands, one at 400 and other at 512 feet. Lease is 900 feet from new well completed to second sand making 400 barrels. Oil is high grade 35c premium and long life. Price $9,500.00, terms if desired. Write or wire Walter A. Todd, 965 First National Bank Bldg., Cincinnati, Ohio.

THE RESULT producing benefits of The Oil and Gas Journal Classified Wants Section is helping the men of the industry to get the maximum good out of their equipment.
Good machinery, equipment, etc., is being kept in operation by reason of alert men buying and selling through the Classified Wants Section.
These men know that it is economically sound for a concern to sell good equipment which it cannot use. Therefore, thrifty executives use the Classified Wants Section as an economizing move that is helpful to the entire industry.
Read the advertisements in the Classified Wants Section every week. It will help you.

25 CENTS per line first insertion; 15c per line each additional insertion. Cash in advance.

CLASSIFIED WANTS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

PRODUCING Royalties in Texas bought and sold. J. F. Marion Co., Magnolia Bldg., Dallas, Texas.

EASTERN New Mexico State oil leases; 5-year renewable; 5-cent rental; 20,000 acres in Salt Creek region; good possibilities; development expected. Sold in section units, 25 cents per acre. Good to hold for drilling or speculation purposes. McDonald & Jewett, Roswell, New Mexico.

WHITE SPACE at the top and bottom of an advertisement makes it conspicuous. Ask for it in your next advertisement. Figure the cost at regular rates per line.

640 ACRES, new five-year commercial Producers "88" oil and gas leases. Eastman Pool, Cowley County, Kansas. Within 2 miles of new 735-bbl. well and several others making 300 to 400 bbls. daily. Priced right, if taken at once. R. P. O'Grady, 404 Gumbel Bldg., Kansas City, Mo.

20 WELLS drilling or located in Moffat County, Colorado. We have attractive royalties and leases to offer. Moffat County Investment Co., Craig, Colo.

BE SURE to have your advertisement in the Semi-annual Review. It will be published on July 31. Mail your advertisement NOW so you will be absolutely suer of getting in that issue.

GUADALUPE COUNTY LEASES

$3.00 AN ACRE

Lease between Seguin and Cibilo River in Guadalupe County, Texas, where dozen of the largest companies in the United States hold leases, and where several tests are soon to be drilled can be had today for $3 an acre. Get particulars.

We also have leases along Marathon Fold and Balcones Fault from 10 cents an acre up. Here are a few of them:

Reagan County	$3.50 an acre
Pecos County	1.00 an acre
Medina County	.50 an acre
Crockett County	2.00 an acre
Bandera County	.40 an acre
Gillespie County	.10 an acre

30 other counties.

Free map of Texas showing the Marathon Fold and Balcones Fault is given with each inquiry. Write today for our latest list of bargain leases in Texas and free map. No obligation.

GULF REALTY COMPANY
284 Bedell Bldg., San Antonio, Texas

FOR SALE—16,000 acres Montana land in fee, with all oil and mineral rights or oil rights separately. Good geology. C. E. Honkomp, Cashier, First National Bank, Ashton, Iowa.

OIL ROYALTY—In the new Blackwell Pool. Units in 160 acres, offset to production. Royalty deed from land owner to buyers. Write today for full information to J. R. Sparks, Blackwell, Okla.

THE SMALL SUM that it costs to insert an advertisement in the Classified Section of The Oil and Gas Journal enables you to place your desires in the minds of men who are always interested in a good proposition.

NOTICE

1,000 acres of oil elases and new derrick; 84 feet wood with Parkersburg rig irons ready to intsall machinery for operation, for sale for the price of derrick construction and material cost, or if desire to operate I will be pleased to arrange to loan the derrick and furnish lease for an interest in the well. There is at present time a well being drilled in that neighborhood which will be completed in a short time. For particulars, write to John Bassarab, 29 Steuben St., Wabash Station, Pittsburgh, Pa.

LEASES—PRODUCTION

PRODUCTION FOR SALE

Eight barrels settled production, four wells; 1,000 acres, flush production, 7 to 8 bbls., room for 50 wells of this kind; have $10,000 in equipment, two drilling rigs and loading rack on switch; 10 wells here will make a man a fortune; wells cost $1,000, completed to tank; oil sells for $2.50 at switch. Six pay sands under this shallow production to Woodbine. More than I can finance alone; will sell all or part interest. If you overlook this, you overlook one of the best bets in Texas today. Come here and let me show you. H. C. Jennings, Bonner Hotel, Lufkin, Angelina County, Texas.

POSITION WANTED

WANTED AT ONCE—Cleaning out work where I can also pump and look after a lease of about 10 wells. I have had 9 years of this kind of experience. Lock Box 142. Virgil, Kans.

REFINERY ENGINEER—Graduate Chemical Engineer with experience in operation, laboratory and construction, desires position in operating or engineering department. Address Box A-290, care The Oil and Gas Journal, Tulsa, Okla.

TWO PROVED engineers, qualified in Appraisal, Geology, Leasing, Practical Development and Production wish firm financial backing for preliminary investigation, acquisition and operation oil properties in Colorado, New Mexico. Nothing to sell or promote except loyal service with responsible associates. Address Box A-301, care The Oil and Gas Journal, Tulsa, Okla.

WANTED—Position as superintendent. Twenty years' experience qualifies me to handle your tools, development and production. Address Box A-262, care The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED man having had charge of drilling and production for 20 years, would like position with oil company, anywhere; prefer Colorado. Good reference. Address Box A-291, care The Oil and Gas Journal, Tulsa, Okla.

PRACTICAL refinery laboratory man, stillman, treater or any position where ability counts, references. Address Box A-257, care The Oil and Gas Journal, Tulsa, Okla.

RESPONSIBLE POSITION wanted by civil engineer who has had several years 'oil field experience managing large oil properties. Now employed developing Oklahoma properties, but desires employment in Rocky Mountain States. Excellent references. Address Box A-243, care The Oil and Gas Journal, Tulsa, Okla.

ADVERTISING RATES

The cost of advertising in the Classified Wants Section is very reasonable. It costs 25 cents a line for the first insertion and 15 cents a line for each following insertion. Six words usually make a line. **Cash** with the order.

This useful table will help you to figure the cost of advertising in this Classified Section. Keep it for reference:

	One Time	Two Times	Three Times	One Month
3 lines..	$ .75	$1.20	$1.65	**$2.10**
4 lines..	1.00	1.60	2.20	**2.80**
5 lines..	1.25	2.00	2.75	**3.50**
6 lines..	1.50	2.40	3.30	**4.20**
7 lines..	1.75	2.80	3.85	**4.90**
8 lines..	2.00	3.20	4.40	**5.60**
9 lines..	2.25	3.60	4.95	**6.30**
10 lines..	2.50	4.00	5.50	**7.00**

WANTED

WANTED—Party to help develop large acreage in southwest Indiana. F. M. Weister, Box 514, Carnegie, Pa.

WANTED—Party to drill well on 160-acre lease for acreage and interest in well in Arkansas. L. D. Perkeypile, Redkey, Ind.

WANTED—To hear from Joseph A. Sanders, who owns part interest in lease in Section 30-17-13, Union County, Arkansas. Have sale for same. Answer at once. L. W. Chaney, Lawson, Ark.

WANTED

WANTED—Producing royalties, Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

WANTED — 250 investors to put in $100 each to drill well on block of acreage on structure approved by geologists. For further information write owner. Address Box A-280, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—REFINERIES

FOR SALE

Controlling interest in a company owning 600 bbls. of daily production and a large amount of proven acreage; a 2,500-bbl. refining plant with ample crude supply within 5 miles; excellent pipe line facilities; plant located on M. K. & T. and Rock Island railroads and in Group 3; local market for 60 per cent of sales and offering splendid territory for own service stations. Company is well established and operating at plant capacity. Wonderful proposition for merger or nucleus for new company. This interest can be bought immediately at a great sacrifice. Address Box A-252, care The Oil and Gas Journal, Tulsa, Okla.

FOR SALE, July 21st.—Refining plant of American Refining Co., bankrupt; building site 24 acres; substantial brick buildings; riveted steel storage tanks, about 12,000 bbls. capacity; pipe still, about 500 bbls. daily capacity; chemical treating system; has been operated under lease 1923 to April, 1924; now closed down. Cost of plant, approximately $90,000. Must be sold to satisfy creditors. Address your bid to J. I. Jones, Trustee, Box 1005, Great Falls, Mont.

BUSINESS OPPORTUNITY

COLLECTIONS—No charges unless claim is collected; satisfaction guaranteed. Tulsa Credit Exchange, 305 National Bank Commerce Bldg., Tulsa, Okla.. Osage 4272.

CAPITAL—Eastern and Canadian can be quickly reached through brokers, bank managers and salesmen; valuable information upon request. Amster Leonard, First National Bank Bldg., Chicago, Ill.

GARAGE—Fine location, on rock road, on Santa Fe Trail; long established business; priced at a bargain; the best reasons for selling; for full particulars, write Levasy Garage, Levasy, Mo.

OIL AND GAS investment, northwestern Pennsylvania; new section; ready market. Get particulars. Address Box A-305, care The Oil and Gas Journal, Tulsa, Okla.

CAPITAL—Responsible promoter will raise $50,000 to $100,000 for business or venture that promises a worthwhile future. Address P. O. Box 457, Chicago, Ill.

FOR SALE—Tank station, doing a nice wholesale business. Home Oil Co., Hugo, Okla.

FOR SALE

Completely equipped machine shop employing 11 men, near shallow oil field, another now opening; a good paying proposition; 17 years in business; only shop in 50 miles radius; reason for selling, owners going into implement manufacturing business. Cameron Machine Shop, Cameron, Texas.

THE TIME SPENT in writing a description of the good material which you would like to procure at a reasonable price will be well spent if you mail it to The Oil and Gas Journal Classified Wants Department for next week's issue.

The Classified Wants Section will help you to get just what you want, as the students of the Classified Section are great in number and control the buying or selling of a large portion of the material used in the oil and gas industry. Let your fellow readers help you. They can, if you put your advertisement in the Classified Wants Section.

BUSINESS OPPORTUNITY

PANHANDLE, Carson County, Texas, the coming oil city. Trackage, business and residence lots for sale by owner. Fred Horsbrugh, Amarillo, Texas.

CORE DRILL your structure with diamond drills and reduce hazard of wildcatting. Let us help your geologists correlate structure before you put cable tools at work. The cost is relatively small and the possible saving enormous. Drilling Corporation of America, 205 Cosden Bldg., Tulsa, Okla. Phone Osage 8183.

ADVERTISING RATES

The cost of advertising in the Classified Wants Section is very reasonable. It costs 25 cents a line for the first insertion and 15 cents a line for each following insertion. Six words usually make a line. **Cash** with the order.

This useful table will help you to figure the cost of advertising in this Classified Section. Keep it for reference:

	One Time	Two Times	Three Times	One Month
3 lines..	$ .75	$1.20	$1.65	**$2.10**
4 lines..	1.00	1.60	2.20	**2.80**
5 lines..	1.25	2.00	2.75	**3.50**
6 lines..	1.50	2.40	3.30	**4.20**
7 lines..	1.75	2.80	3.85	**4.90**
8 lines..	2.00	3.20	4.40	**5.60**
9 lines..	2.25	3.60	4.95	**6.30**
10 lines..	2.50	4.00	5.50	**7.00**

WELL LOGS

FOR SALE—First two years Oklahoma Geological Survey Well Log Service. About 5,200 logs. $150.00 f.o.b. Tulsa. Frank C. Green, 1434 S. Cincinnati, Tulsa, Okla.

BE SURE to have your advertisement in the Semi-annual Review. It will be published on July 31. Mail your advertisement NOW so you will be absolutely sure of getting in that issue.

INCORPORATIONS

DELAWARE incorporator. Charters; fees small; forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

FOR SALE—PETS

NEWFOUNDLAND dogs for sale from registered stock at reduced prices. A wonderful playmate for children. Address Box 62, Fort Riley, Kans.

REGISTERED Bull Pups—Bulldog Park, 501 Rockwood, Dallas, Texas.

ALL WHITE and beautifully marked Collie pups. Louise Spoher, Washington Heights White Collie Kennels, Nevada, Missouri.

MAILING LISTS

STOCKHOLDERS

I have the stockholders' names in over 1,000 companies. Ask for price list, showing names of company and number and price of names.

A. F. WILLIAMS
Established 1880 166 W. Adams St.
Chicago, Ill.

STANDARD FORMS

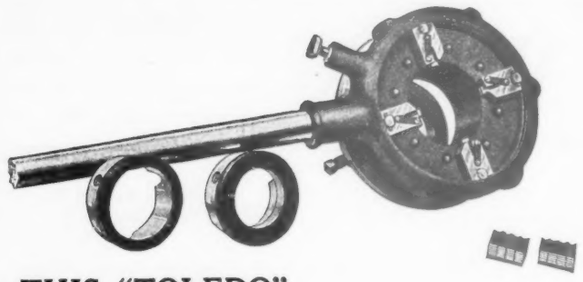
CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of Gas Meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.

DERRICK PUBLISHING CO.
Oil City, Penn.

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letterhead gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

WRITE your advertisement, mail it to The Oil and Gas Journal, and it will be placed in the hands of thousands of producers and refiners in all parts of the world. It doesn't cost much.



THIS "TOLEDO"

FOR THREADING 2″, 2½″, 3″ TUBING

This particular "TOLEDO" tool is built especially for the oil operator. It cuts 11½ threads on 2″, 2½″ and 3″ oil well tubing.

It is strongly built and positive in operation. It weighs but 39 lbs. and for a direct operating tool cuts threads with remarkable ease. It is equipped with ratchet which permits operation in close quarters and is just the tool oil well operators need for this work.

Drop a card today for the complete "TOLEDO" catalog.

"TOLEDO"

This is your assurance of "Toledo" Quality

The Toledo Pipe Threading Machine Co.

Toledo, Ohio New York Office, 50 Church St.

TURNS TO MOTORSHIPS; CHEAPER THAN COAL

NEW YORK, July 5.—Speaking of the company's decision to motorize its fleet, H. Farquaharson Kerr, European manager for the K. K. K. Roosevelt service, said the motorship has passed the experimental stage and is now just as reliable as the motor car. "The decision to change the Kerr fleet over to motorship," he said, "was simply a cut and dried business arrangement. We found our ships running on the dearest coal bunker bunkering route in the world. At Panama coal is about 48s a ton. At other points coal has to be shipped out from British sources. It meant that as a steamship service there was an absolute loss, but with the Diesel engines the service will be a good paying concern. For example, we get all our oil bunkers from San Pedro, in California, and 900 to 1,000 tons of oil, stored in double bottoms, will take one of our vessels from New York to Japan and back again. Whereas 1,600 tons of coal were necessary for the voyage simply from New York to Japan. These figures show how big a saving in space the change to motorships means. The steamers used 35 tons of coal per day and the motorships will use about 7½ to 9 tons of oil per day."

HAMILTON DOME FIELD

CASPER, Wyo., July 5.—The Hamilton Dome Field in Hot Springs County, Wyoming, is the only producing field in that county at present. Warm Springs is shut down and the Alliance refinery is also closed down for the present. Hamilton Dome is making about 600 bbls. daily from 28 wells and the production is all pumped. It goes from the field to a connection with the Grass Creek-Greybull line of the Illinois Pipe Line Co. and then to Greybull where it is handled by the Standard of Indiana there. Hamilton Dome is operated mainly by the Western States Oil & Land Co., a subsidiary of the Midwest Refining Co. The Empire State Oil Co. also has some production there but at present there are no wells drilling.

LEASES MUST AWAIT EXPIRATION OF OLD

No new oil and gas lease on lands on the Five Civilized Tribes is to receive consideration by the Department of Interior before the expiration of an old lease according to a new ruling of the department:

Where there is an existing oil and gas lease covering restricted Indian land, no new oil or gas lease will be given favorable consideration unless executed and filed after the expiration of the former lease. In cases of cancellation of the former lease for violation of its terms or on application of the lessee, a new lease to receive favorable consideration must be executed and filed after such cancellation is entered of record on the docket in the office of the superintendent for the Five Civilized Tribes. Provided, that where application for cancellation of an existing lease is completed and filed by the lessee in the office of the superintendent within the period of 90 days immediately preceding the expiration date thereof, such application will be held in the office of the superintendent without action and no new oil and gas lease will be given favorable consideration unless executed and filed after the expiration of the lease term.

MOTHER OF OIL MAN DIES

HOUSTON, Tex., July 7.—Mrs. Anna O'Neil died recently at her home in this city, aged 79 years. She was the mother of John and Henry O'Neil, well known oil men in the Texas fields. Deceased lived in Bradford, Pa., for many years before coming to Texas, following the opening of the Spindletop Pool.

even if it's only in one joint out of 500 that the weld is defective

—how can you tell, with any degree of certainty, that it isn't on the casing you are using in your well. You can't be sure—that's obvious, but this fact you **can** be positive of—one joint failure—

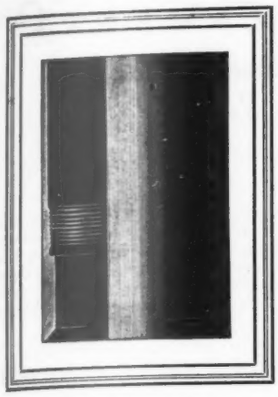
that's once too often

Recent investigations have conclusively proven the superiority of SEAMLESS CASING over welded. STANDARD Seamless Casing is made of high Carbon Steel—of high tensile strength which guarantees a stronger, sturdier joint. It's nearly perfect roundness enables it to successfully withstand the tremendous pressures of modern deep-well drilling. Special couplings—and perfect threads—give it added strength to withstand the shocks and jolts to which all casing is subjected.

Write for your copy of the STANDARD Bulletin that gives all the facts

STANDARD SEAMLESS CASING HAS NO WELD!

STANDARD SEAMLESS TUBE CO. ◆ PITTSBURGH, PA.



Texas Pattern Shoe.

Larkin

Shoes
Packers
Die Nipples
Swabs
Clamps
Oil Savers

QUALITY - First
Prices Reasonable

Sold By Leading Supply Companies

LARKIN
Packer Co.

St. Louis, Mo. Tulsa, Okla.

OIL MEN BID MILLIONS WITHOUT A QUIBBLE

(Continued from Page 21)

The end of each struggle, brought about when one of the contestants successfully outbids his fellows, usually marks the beginning of another warm contest as another good tract is put up, until all of the high-priced tracts have been placed in the hands of successful bidders, and the sale has been closed.

Absolutely No Quibbling

One of the most remarkable features of the bidding on any of the Osage Indian tracts has been the total absence of quibbling among the bidders. In no instance has the rights of the succesful bidder been questioned and when a bid has been offered, the bidder sticks to it, regardless of the price. Colonel Walters has declared that in all his experience as an auctioneer, he has less trouble and more cooperation from the Mid-Continent oil companies in bidding for the Osage leases than in any other sale he has conducted.

Not content with having gone through the sale, often bidding millions by the nod of the head or by the raising of a hand, with good sportsmanship and keen business judgment always apparent, the big company executives show their ability by paying one-fourth of the purchase price at the office of the superintendent immediately after the conclusion of the sale, conforming to the published requirements of the sale. In very few cases has the superintendent been compelled to hunt up the buyer. In most cases, the buyer is anxious to pay down his money and start his material rolling toward the new property.

Here again have the larger companies displayed remarkable ability in development work. In some cases locations have been staked on properties before the sale is completed. In others, the locations are made on the following day, with material on its way to the lease. Hundreds of thousands of dollars worth of material often has been assembled at some vantage point, awaiting the outcome of the sale. All that is needed is the word "go," and when it is given, men, horses and trucks spring into action in the race for the first oil on the new leases.

To show the speed with which well directed efforts may be applied, one well was completed by the Midland Oil Co. upon acreage purchased at the sale March 18-19, 1924, just 35 days after the tract was purchased. The amount of preparation necessary for such an accomplishment is tremendous and credit for such a performance rightfully belongs to the executive heads of this company. Other companies have made excellent records in developing Burbank properties and acreage in other parts of Osage County and Oklahoma.

It is questionable whether executives in other industries would account for themselves in the efficient manner of the Mid-Continent producers under the same conditions. Comparisons, of course, would be mere assumptions. It is true, nevertheless, that the leaders of the major operating companies are big men, operating on a big scale with a good record of achievements behind them.

OFFICERS REELECTED

OIL CITY, Pa., July 5.—At the meeting here of the Pennsylvania Grade Crude Oil Association, the board of directors reelected the following officers: E. C. Breene, Oil City, Pa., president; J. P. Flynn, Sistersville, W. Va., vice president; E. M. Lyons, Philadelphia, recording secretary; S. Messer, Oil City, treasurer; R. J. Alexander, Oil City, secretary. To the previous board of directors were added: Howard Atha, Mannington, W. Va.; H. A. Wallace, Charleston, W. Va.; J. P. Herrick, Olean, N. Y.; David B. McCalmont, Franklin, Pa.; Gilbert H. Watson, Parkersburg, W. Va.; O. C. Dunn, Marietta, Ohio; and Clinton G. Dorn, of Bradford, Pa.

THE EMPIRE OIL METER

The most accurate and efficient device on the market for measuring oils, gasoline and all other liquid petroleum products.

SIMPLE DEPENDABLE DURABLE

The EMPIRE is an Oscillating Piston meter. It measures by positive displacement. It is different from every other type of oil meter. It is extremely accurate. It **stays** accurate.

Made in all sizes from ⅝" to 6"
Send for descriptive circular 109-O

NATIONAL METER COMPANY
Established 1870
299 Broadway, New York
Chicago Boston Cincinnati Atlanta San Francisco Los Angeles

An Ideal Combination
LUNKENHEIMER
"Renewo and Ferrenewo" Valves

Of the same design, with regrindable seating surfaces and all parts renewable, including the nickel seat and disc.

The "Renewo" with bronze body, suitable for the highest and the "Ferrenewo" with iron body, (which is less expensive) for the lower pressures and temperatures, form a combination upon which many plants have advantageously standardized.

Both provide the same unexcelled efficiency with maximum economy of service, for the respective degrees of pressures and temperatures for which they are warranted.

Booklets 535-567 JA afford complete information.

THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI

"America's Best since 1862"

102-31-91

Oil Securities Higher; More Active

Issue of Atlantic Refining Co. Serial Notes Quickly Oversubscribed. Indian Refining Co. Quarterly Report. Pure Oil and O. P. & R.

By N. O. Fanning
Room 525, No. 30 Church St., New York

NEW YORK, July 7.—Oil securities were higher and more active during the past week, Cosden & Co. common, Marland Oil, Magnolia Petroleum, Phillips Petroleum and Atlantic Refining made substantial recoveries from the low quotations established a week ago.

The issue of $15,000,000 Atlantic Refining Co. 4½ per cent serial notes offered by the Equitable Trust Co., Blair & Co. and Cassatt & Co. was quickly oversubscribed. The notes mature serially July 1, 1926 to 1928, and were offered at prices to yield from 4.50 to 4.75 per cent. The proceeds are to be used exclusively to retire bank loans.

In connection with the issuance of the notes, Atlantic Refining Co. has made public a statement of earnings for the first four months of 1924. Gross income for the period was $38,934,117 and net earnings after depreciation, etc., available for interest and federal taxes were $1,902,322.

The consolidated statements of the Atlantic Refining Co. and subsidiaries as of April 30, 1924, after giving effect to the present financing, shows total assets of $134,051,610, comparing with $122,634,048 on December 31, 1923. Profit and loss surplus was $21,371,988, against $21,199,762. Current assets on April 30, 1924, were $60,749,698 and current liabilities $6,670,763.

The consolidated balance sheet of Atlantic Refining Co. and subsidiaries as of April 30, 1924, adjusted to show the effect of the present financing, compares with December 31, 1923, as follows:

	Assets	
*Plant, equipment, etc.	$ 63,090,537	$ 62,249,583
Investment in associated Cos.	9,328,976	8,772,391
Cash	3,989,946	2,241,676
Accounts receivable	12,834,986	12,285,552
Note receivable	1,130,734	655,605
Inventories	41,869,049	32,760,774
Investments	715,193	825,365
U. S. Government bonds	.....	1,978,668
Miscellaneous current assets	209,790	251,746
Sundry assets	882,399	612,688
Total	$134,051,610	$122,634,048
	Liabilities	
Preferred stock	$ 20,000,000	$ 20,000,000
Common stock	50,000,000	50,000,000
Funded dept	30,716,000	15,896,000
†Subsidiary companies' stock	279,440	279,400
Deficit subsidiary companies	127,764	181,545
Accounts payable	5,888,457	4,692,457
Notes payable	.....	5,404,122
Federal taxes	245,870	45,577
Accrued liabilities	536,437	199,096
Deferred items	655,950	428,887
Ins. reserve, etc.	4,475,272	4,660,293
Surplus	21,371,988	21,199,761
Total	$134,051,610	$122,634,048

*After depreciation and depletion. †Not held by Atlantic Refining Co.

Pure Oil-Oklahoma P. & R.

A special meeting of the stockholders of the Oklahoma Producing & Refining Corp. has been called for July 28, 1924, for the purpose of allowing stockholders of record July 8, 1924, to vote on a contract between Oklahoma Producing & Refining Corp. and the Pure Oil Co. by which contract the preferred stockholders of the Oklahoma corporation will receive par for their preferred stock in the 8 per cent preferred stock of Pure Oil Co.

Common stockholders of the Oklahoma Producing & Refining Corp. will receive one share of common stock of the Pure Oil Co. for each 10 shares of the common stock of the Oklahoma company.

Indian Refining

The report of the Indian Refining Co. and subsidiaries for the first quarter of 1924 shows net profits of $121,782 after depreciation, etc., equivalent, after deducting Central Refining Co. preferred dividend, to $5.09 per share on the outstanding $2,296,400 preferred stock, on which no dividends have been paid since December 31, 1921. This compares with a deficit of $161,025 in the same quarter of 1923.

For the year ended December 31, 1923, Indian Refining Co. and subsidiaries report a deficit of $2,041,387 after interest, depreciation, depletion, etc.

In his remarks, President Graham, of the Indian Refining Co., says: "The net profit for the quarter is not large, but when results of the previous quarter, weather conditions and the time of year and conditions obtaining generally throughout the industry are taken into account, a degree of optimism is believed to be warranted concerning results of operations for the whole year.

"The loss reported for 1923 was the result of unsatisfactory conditions in the oil industry generally over the last half of the year, the company's unfavorable financial conditions since 1921, lack of cracking capacity and certain other facilities for economic refining operations, and unprofitable crude contracts.

"Completion of pipe lines of western Kentucky and the establishment of a through pipe line rate from the Mid-Continent fields to Lawrenceville, Ill., effective in 1924, place the company for the first time in its history in an independent position on a competitive basis with other refiners, and together with purchases from local producers insures an adequate supply of crude on a competitive basis. This has enabled the company to replace unprofitable contracts which have been a constant source of loss for several years."

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

No.	Stock—	Par	§Dividend Rate	Closing Quotations July 7	June 30	Range High	Low	1924 Low
1.	American Republics	..	..	*36	*36	43		25
2.	Associated Oil	25	6	*28⅛	29⅛	34⅝		27⅝
3.	Atlantic Refining, common	100	4	91	92¼	140½		83½
4.	Barnsdall "A"	25	..	20¼	21⅝	18⅜		14
5.	California Petroleum, common	25	7	22⅝	22	29¼		21⅝
6.	Cosden & Co., common	..	..	26⅝	27⅜	40¼		23⅛
7.	General American Tank	..	†3	*39	*39½	46¼		38¼
8.	General Asphalt	100	..	41¼	41⅞	49		31⅜
9.	General Petroleum	25	8	41	40⅞	41½		38⅞
10.	Houston Oil	100	..	72	70	82½		61
11.	Independent Oil & Gas	10	..	*7⅝	7¾	9¼		6⅜
12.	Indian Refining	10	..	*6⅝	6	7		3¾
13.	Invincible Oil	50	..	12⅛	12½	15⅞		11¾
14.	Maracaibo	..	..	28½	29	37½		25⅝
15.	Marland	..	..	31½	31	42		29
16.	Mexican Seaboard	..	..	20¾	21¾	24⅛		14½
17.	Middle States Oil	10	..	1⅜	1⅜	6⅜		1⅜
18.	National Supply	50	6	58	58½	72¼		56
19.	Pacific Oil	..	†2	48¾	48½	58¼		45
20.	Pan-American, common	50	16	52½	52	61¼		44¼
21.	Panhandle Prod. & Ref.	..	..	*2⅛	*2	4½		2¼
22.	Phillips Petroleum	..	†2	35⅝	36¼	42¾		32¾
23.	Producers & Refiners	50	..	26½	27⅛	43½		22⅝
24.	Pure Oil, common	25	6	20⅝	20⅝	26⅜		20
25.	Royal Dutch, N. Y. sh.	13.40	2.62	50	48⅝	59⅛		48
26.	Sneil Transport	10	x92½	*35¼	*34¼	41½		33
27.	Snell Union, common	..	†1	17	17½	20¼		16¼
28.	Simms Petroleum	10	..	13	13⅛	14⅞		10⅝
29.	Sinclair Consolidated, common	..	†2	18⅝	18¾	27½		18⅛
30.	Skelly Oil	25	..	19½	20	29		17¾
31.	Standard of California	25	8	57¾	57⅜	68½		55½
32.	Standard Oil of New Jersey	25	4	34⅝	34⅞	42¼		33
33.	Standard of New Jersey, pfd.	100	7	117⅝	118	118⅝		115⅝
34.	Superior Oil	..	..	7	6⅝	7⅝		2⅝
35.	The Texas Co.	25	12	39½	39½	45⅝		37¼
36.	Texas Pacific Coal & Oil	10	..	*9	9⅝	15¼		8¼
37.	Tide Water Oil	100	4	123½	*120	151		119
38.	Transcontinental	..	..	4⅝	5⅛	6¼		3⅜
39.	Union Tank, common	100	5	*97	*97	104		94
40.	White Eagle Oil & Refining	..	2½	*24½	24	29⅝		23⅛
	Standard Oil Stocks							
41.	Anglo-American Oil	£1	25	15	*15	18		14⅝
42.	Borne Scrymser	100	12	*220	*220	264		150
43.	Buckeye Pipe Line	50	14	*61	62	85½		60
44.	Chesebrough Mfg., common	25	10	*49½	*49½	53¾		29¼
45.	Continental Oil	25	8	*39	*39	54⅞		42½
46.	Crescent Pipe Line	25	..	*11½	*11½	20		16
47.	Cumberland Pipe Line	100	10	*125	*125	144		109
48.	Eureka Pipe Line	100	8	*95½	*95½	105		95
49.	Galena-Signal, common	100	4	*56½	53½	69¾		55¼
50.	Humble Oil & Refining	25	4.8	36	37½	43¾		36
51.	Illinois Pipe Line	100	12	131	*130	161		131
52.	Imperial Oil, Ltd.	25	12	100½	101½	119		99
53.	Indiana Pipe Line	50	16	91½	*90	100		85
54.	International Petroleum Co.	100	x50	17⅛	18	22¼		16⅞
55.	Magnolia Petroleum Co.	100	4.5	*128	*128	160		124
56.	National Transit	12.50	16	*21⅛	22	26⅞		21¼
57.	New York Transit	100	10	*62	62	97		69
58.	Northern Pipe Line	100	6	80½	*84	107½		80⅛
59.	Ohio Oil Co.	25	8	61	61½	79⅛		60
60.	Penn-Mex. Fuel	25	..	*31	*31	45⅝		32⅛
61.	Prairie Oil & Gas	100	8	212	212½	269		204⅜
62.	Prairie Pipe Line	100	8	10⅛	102½	111		100
63.	Solar Refining Co.	100	15	*183	184	225		170
64.	Southern Pipe Line	100	16	95	*94½	100		89½
65.	South Penn Oil	100	..	126	130	176		130
66.	South West Pa. Line	100	8	*85	88	89		80
67.	Standard of Indiana	25	10	56⅝	56½	58⅝		55⅝
68.	Standard of Kansas	25	8	*39½	39⅝	50½		38⅝
69.	Standard of Kentucky	25	16	108⅛	106	120		102¼
70.	Standard of Nebraska	100	20	*228	235	256½		198
71.	Standard Oil of New York	25	5.6	39½	39½	48		37⅝
72.	Standard of Ohio, common	100	10	288	288	236		277
73.	Swan & Finch	100	..	40	*42	81		34
74.	Vacuum Oil	25	10	62½	63½	69¼		56½
75.	Washington Oil	10	10	*26	*27½	29		25
	Miscellaneous Stocks							
76.	Cities Service, bankers' shares	..	†21	*13⅛	13⅛	16		13¼
77.	Gulf Oil Corp. of Pennsylvania	25	6	58	58	65		56⅝
78.	Mutual Oil	5	10	9⅝	10	14		9⅝

*Bid, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

July 7	48.28	June 2	48.88	Apr. 29		49.56
June 30	47.69	May 27	49.01	Apr. 22		46.77
June 23	46.92	May 20	48.25	Apr. 15		50.03
June 17	47.94	May 13	48.24	Apr. 8		52.66
June 10	47.63	May 6	49.59	Apr. 1		51.74

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended June 28 totaled 1,034,000 bbls., a daily average of 147,714 bbls., against 832,000 bbls., a daily average of 118,857 bbls. for the week ended June 21.

	Week ended June 28
At Atlantic Coast ports—	
Baltimore	140,000
New York	819,000
Others	75,000
Total	1,034,000
Daily average	147,714
At Gulf Coast ports—	
At Gulf Coast ports	.....

According to figures collected by the American Petroleum Institute, imports of crude and refined oils at the principal ports for the week ended June 28 totaled 2,526,000 bbls., a daily average of 360,857 bbls., compared with 1,391,000 bbls., a daily average of 198,714 bbls. for the week ended June 21.

	Week ended June 28
At Atlantic Coast ports—	
Baltimore	29,000
Boston	141,000
New York	898,000
Others	420,000
Total	1,487,000
Daily average	212,429
At Gulf Coast ports—	
Galveston district	486,000
New Orleans and Baton Rouge	279,000
Port Arthur and Sabine district	211,000
Tampa	63,000
Total	1,039,000
Daily average	148,428
At all U. S. ports—	
Total	2,526,000
Daily average	360,857

TWO AND HALF CENTS TAX UNDER ESTIMATE

OKLAHOMA CITY, Okla., July 7.—During the fiscal year ending June 30 the State Audtor collected as a 3 per cent gross production tax on oil $7,538,516.63, $75,000 more than for the previous fiscal year. Penalties collected amounted to $30,754.03, included in the grand total. Penalties for the preceding year aggregated $12,741.80. Collections during the second quarter of this calendar year amounted to $1,868,933.60 and for the like quarter of last year $2,146,095.12, a difference of over $275,000.

The gasoline tax division of the Auditor's office collected during the fiscal year $1,682,393.25. Of this amount $866,942.98 was collected after March 7, when a tax of 2½ cents per gallon was paid on gasoline. Before that date a tax of 1 cent had been collected. Figures for four months under the 2½-cent law indicate the total annual collections will be about $2,500,000, or $1,500,000 under an estimate made by the legislature.

GOOD WELL IN PENNSYLVANIA

PITTSBURGH, Pa., July 7.—The largest oil well in northwestern Pennsylvania since the Tidioute development two years ago has been completed in the Queen sand at Whig Mill, near Queen Field, a center of oil excitement half a century ago. The well was completed at about 1,500 feet, producing between 500,000 and 1,000,000 feet of gas and between 100 and 200 bbls. of oil daily.

LAGO PETROLEUM CORP. INCREASE IN CAPITAL

DOVER, Del., July 7.—Lago Petroleum Corp. has certified to the Secretary of State an increase in capital from 2,500,000 shares of no par value to 4,000,000 shares.

In May Lago Petroleum sold 400,000 shares of its stock at $5 a share to British Mexican Petroleum Co. Of the 2,500,000 shares previously authorized, 1,650,000 shares were outstanding in January.

A contract was entered into with British Mexican Petroleum Co., by which the British interests will develop the properties of Lago Petroleum in the Maracaibo basin of Venezuela. Lago Oil & Transport Co., whose $2,500,000 preferred stock is all owned by British Mexican and 500,000 shares of no par common owned equally by British Mexican and Lago Petroleum, will transport the oil from the producing properties to the 30,000 bbl. refinery which it will build at Los Taques, Venezuela. The contract calls for minimum deliveries of 25,000 barrels of oil daily. The object of British Mexican Petroleum Co., representing the foremost shipping interests in Great Britain, is to insure a future supply of fuel oil.

THE TEXAS CO. AWARDED VERDICT ON CONTRACT

AUSTIN, Tex., July 7.—A verdict for $381,654 in favor of The Texas Co., against the International-Great Northern Railroad, the judgment being declared a foreclosure of a first lien on the franchises, roadbed, rolling stock and property of the railroad, was returned by District Judge George Calhoun in Fifty-third District Court Saturday. Attorneys for the railroad gave notice of a motion for a new trial.

The suit grew out of an alleged breach of contract by the International & Great Northern Railway Co. to purchase fuel oil from The Texas Co., the contract being dated January 1, 1914. The alleged breach claimed to have occurred about the time receivers were appointed for the railway company in 1914. It was alleged The Texas Co. secured a judgment in the Federal Court at Houston against the former railway company for a large amount, but that it was never paid, and the railroad properties were sold in 1922 under a decree of foreclosure entered by the Federal Court.

RED RIVER TRANSFER FROM RECEIVERSHIPS

Transfer of the Red River oil lands located on the Texas and Oklahoma borders from a receivership of the United States Supreme Court to the Department of the Interior has been made. The oil field has been in Federal receivership for a number of years as a result of the decision of the Supreme Court that the lands along the Red River belonged to the public domain of the United States. Prior to this decision many persons had attempted to acquire the lands and minerals through locations under the land laws and oil and gas leases from the State of Texas and other sources.

They had begun to explore the Red River as an oil field, many wells having been sunk that proved productive. The decision of the Supreme Court resulted in vesting title in the United States and placing them in the hands of the Federal Receiver, who has been holding them, pending the transfer of the property to the Interior Department. This transfer has now been made, together with proceeds from the oil wells, running into more than $1,000,000.

A check for $25,000 was also paid the Department by the court to continue the operation of the wells and all the monies and securities accumulated by the receiver will be turned over.

Late News From the Fields

OKLAHOMA

Failures alternated with small producers in the Coweta district of Wagoner County. The Furhman Petroleum Co. abandoned No. 1 Childers, NW cor. SE, Section 28-17-16, as dry at 1,674 feet. Carmichael and others also recorded a failure in No. 1-A J. Vann, C NE NE NW, Section 1-17-15, at 1,168 feet. J. Hare and associates shot No. 1 Austin, NE cor. SW SW, Section 1-17-16, with 40 quarts in sand at 715-32 feet and it made 20 bbls. of 40 gravity oil. Martin and others plugged No. 5 McIntosh, SW cor. SE SW, Section 2-17-16, as a duster at 820 feet. Machines were in place for two new tests in spite of this discouragement, including Whaleback and others' No. 1, C SW NW, Section 2-17-16, and the O'Mar Oil Co.'s No. 1 McIntosh, SE cor. NW SW, same section.

Deaner & King abandoned No. 1 Grayson, NW cor. SE, Section 5-17-16, at 1,250 feet. Charles Ramstead and others had a 20-bbl. producer in No. 1-A Grayson, NW cor. NE, Section 6-17-16, following an 80-quart shot in sand at 1,120-39 feet. Another failure was plugged by H. H. Orr in his No. 1 Haynie, SE cor. NW SE, Section 7-17-16, at 750 feet. A 90-bbl. well resulted from a shot of 100 quarts in sand at 735-58 feet in A. E. Carder's No. 2 Howard, NE cor. NW NW, Section 11-17-16. Young and others treated No. 6 Birney, CWL NE SW, Section 11-17-16, with 90 quarts in sand at 675-90 feet and it made 20 bbls. afterward. A. Castleman had a machine in place for No. 1 Atkins, SW cor. NE NE, Section 13-17-16. B. G. Goble's No. 1, NW cor. NE NW, Section 14-17-16, was good for 20 bb's. after a 125-quart shot in sand at 756-97 feet. Sewell & Knox shot No. 3 Berryhill, NW cor. SW NE, Section 15-17-16, with 100 quarts in sand at 734-51 feet and it made 45 bbls. It was a twin to a dry hole. The Whaleback Oil Co.'s No. 6 Berryhill, SW cor. NW NE, same section, was a 20-bbl. well after a 40-quart shot in sand at 739-42 feet.

McCoy and others plugged No. 1 Mitchell, SE cor. NE, Section 1-16-16, as dry at 1,663 feet.

In the Sho'em Alechem Field of Carter County, the Magnolia Petroleum Co. had a rig up for No. 1 E. Williams, C NW NW SW, Section 35-1s-3w.

In northeastern Creek County, Ireland and others abandoned No. 1 Cooper, CSL SW NW, Section 17-17-11, as dry at 2,885 feet. Hurt & O'Laughlin were drilling at 900 feet in No. 1 W. George, NW cor. Section 31-17-11. S. J. Smith was spudding No. 1-A Sapulpa, NW cor. SE, Section 3-17-11.

The Weiser Oil Co. brought in No. 10 Pickett, C SW NW, Section 10-16-11, good for 10 bbls. after a 60-quart shot in sand at 1,668-98 feet.

In Okmulgee County, the Paraffine Oil Co. shot No. 5 Ross, CSL SW NE, Section 34-16-11, with 40 quarts in sand at 1,934-46 feet and it made 35 bbls. afterward.

In the Graham Field of Carter County, the Hilltop Oil Trust and others had a 90-bbl. producer in No. 12 Benett, CEL SW NE NW, Section 31-2s-2w, from broken sands at 1,980-2,523 feet, with total depth at 2,626 feet. The Humble Oil & Refining Co. was spudding No. 2 Burrows, C SW SW NW, Section 32-2s-2w. The Wildwood Oil Co. abandoned No. 1 Carpenter, C SE SE SE, Section 15-2s-3w, at 2,810 feet and E. P. Harwell plugged No. 1 Lyle, C SW SW SW, Section 14-2s-3w, at 2,398 feet.

In Stephens County, the Magnolia Petroleum Co. abandoned No. 2 Maxey, SW cor. SE NE, Section 30-1n-8w, as dry at 3,235 feet. The C. & O. Drilling Co. was rigging up a rotary for No. 1 Warner, CWL SW NE, Section 22-1s-8w.

The Holbrook Producing & Refining Co. was spudding No. 1-A. CSL SE SE NE, Section 30-2s-7w. The Magnolia Petroleum Co.'s No. 1 Marx, CEL NE NE SE, Section 13-2s-8w, was good for 40 bbls. from sand at 1,900-07 feet.

KANSAS

In Greenwood County, Griggs and others had a rig on the ground for No. 1 Williamson, NE cor. NW, Section 7-25-9.

The National Refining Co. plugged No. 1 Matilee, SW cor. SE, Section 24-21-11, Lyon County, as a failure at 2,235 feet.

Back in Greenwood County, Elroyd and others were drilling at 350 feet in No. 1 Houghton, NW cor. NE NW, Section 7-22-12. Four additional new wells were started on old leases in Township 22-11.

Hazlett and others were drilling No. 1, SE cor. Section 12-22-10, at 1,500 feet. Rhodes & Abel had 1,500 feet of oil in No. 3 Browning, C SW SE SE, Section 18-22-10, and were drilling No. 4 Browning, C SE SW SE, same section, at 1,400 feet. They were also rigging up tools for No. 1 Hughes, C SE SE SW, same section. The White Eagle Oil & Refining Co. abandoned No. 1 Browning, C NE NE NW, Section 19-22-10, as dry at 2,482 feet. The same company and others were drilling at 950 feet in No. 1 Browning, C NE NW NE, same section. The Sinclair Oil & Gas Co.'s No. 2 Browning, C NW NW NW, Section 20-22-10, was pumping 100 bbls from sand at 2,301-35 feet, and its No. 4, C SW NW NW, same section, was good for 250 bb'ls. from sand at 2,277-2,338 feet. The Skelly Oil Co. abandoned the location for No. 1 Householder, SE cor. NE SW, Section 30-22-10.

The Phillips Petroleum Co.'s No. 10 Edwards, C NW NE SE, Section 13-23-10, topped sand at 2,065 feet, and found oil at 2,080-2,120 feet, good for 100 bbls. after a shot of 170 quarts. The Mission Oil Co. apparently ruined its No. 4 Thrall, CWL NW SW, Section 32-23-10, which was estimated good for 200 bbls., when a shot of 100 quarts wrecked the casing. The same company and others shot No. 40 Thrall, C SW NE, same section, with 100 quarts in sand at 2,266-2,320 feet, and the result was 150 bbls. First oil was reached at 2,285 feet.

Chase County is to get another test. About 6 miles northeast of Cottonwood Falls, the Muncey Oil Co. was spudding No. 1, NE cor. SE, Section 1-19-8.

LATE GULF COAST

HOUSTON, Tex., July 8.—The Humble Oil & Refining Co. finished the best well in the Goose Creek Pool in several months when its No. 27 Galliard Peninsula in the bay, came in late in the week, flowing 4,000 bbls. at 4,210 feet. Twenty feet of 4½-inch strainer was set. The same company's No. 47 Smith on the east side of the pool, a redrilled hole, is flowing 3,000 bbls. of fluid, of which 300 bbls. is oil, at 4,010 feet.

In the Hull Pool, the Gulf Production Co.'s No. 14 Hannah Fee, located 1,500 feet west of production, is still drilling around 4,400 feet with nothing of interest showing.

The Sun Oil Co.'s No. 6 Cade at High Island, Galveston County, a semi-wildcat made 475 bbls. Saturday at 3,330 feet. The oil is 34 gravity, which is unusually high for the Coastal region. The history of high gravity wells in the Gulf Coast saline dome region is that they do not last long.

The United North & South Oil Co. drilled in No. 1 Moore on the Caldwell County side of the Luling Field and it is flowing 800 bbls. per day. It is close to the San Marcos River, with production by the same company on the Baker lease, directly across the stream. The well has no special significance, as the Jarmon Oil Co. has wells on the Moore tract.

The Houston Oil Co.'s No. 4 Cartwright ranch, in Live Oak County, is showing for a gas well at 1,620 feet. Locations have been made for Nos. 5 and 6 to the north and south of No. 4. In Medina County, the Clark Oil Co. is setting casing in its test north of D'Danis at 2,315 feet and will make a test. Allen Park and others bailed No. 4 Applewhite in Bexar County at 1,150 feet. The hole bailed about 8 bbls. and will be drilled deeper. B. E. Gates has a location for No. 1 Swearengen, 14 miles southwest of San Antonio.

In Zapata County, J. W. Pipkin and associates will resume drilling No. 2 from 1,510 feet. It is south and east from the Henne, Winch and Faris gas well. The Weber Oil Co. is starting No. 4 Holstein and the Humble Oil & Refining Co. is drilling one of a number of scheduled shallow formation tests on the East ranch. The Cooperative Oil Co. has a location 4 miles west of the Pipkin test.

Getting back to the Gulf Coast counties, the Humble Oil & Refining Co. has made seven shallow formation tests with a light rotary rig at Perry Landing in Brazoria County and is moving the equipment to the west side of the Boling Dome in Wharton County.

ROCKY MOUNTAIN RUNS

CASPER, Wyo., July 7.—Pipe line runs from Rocky Moutnain fields during the past week were as follows:

Salt Creek	91,775
Teapot	2,700
Big Muddy	1,800
Grass Creek	4,410
Elk Basin	1,255
Greybull, etc.	75
Mule Creek	970
Rock River	2,000
Lance Creek	2,035
Poison Spider	1,125
Osage	550
Hamilton Dome	740
Lander	420
Byron	100
Pilot Butte	70
Lost Soldier	5,795
Ferris	150
Cat Creek	4,525
Seahurst	4,320
Miscellaneous	575
Total	128,390

OSAGE LEASE SALES FORMALLY APPROVED

Formal approval of the recent Osage lease auction, held at Pawhuska, Okla., Monday, June 30, was given by the Department of the Interior in a telegram received Tuesday by J. George Wright, superintendent of the Osage Indian Agency. This approval included all leases sold with the exception of Tract No. 108, in the northwest quarter of Section 21-26-6, for which the Carter Oil Co. bid $13,000. The sale of this tract had been disapproved at a meeting of the Osage Council held the day after the sale, and was rejected upon the recommendation of K. C. Heald, Department of Interior geologist.

DEATH OF A. S. WARREN

SHREVEPORT, La., July 5.—Arthur S. Warren, general superintendent of the Ohio Oil Co. in Louisiana and Arkansas, died here following an operation for appendicitis. Mr. Warren was in the employ of the Ohio Oil Co. during the 30 years of his connection with the oil industry, having entered as warehouseman at Bluffton, Ohio, shortly after graduating from the Ohio Northern University, and served in various capacities in the Ohio, Indiana, Illinois and Kentucky fields, being transferred and placed in charge of the company's opeartions in Louisiana shortly after the opening of the Haynesville Field in 1921.

WANT ROYALTIES REDUCED

LOS ANGELES, Cal., July 5.—Operators in the Lomita area of Torrance oil field have notified land owners that unless 50 per cent reduction in royalties is granted wells will not only be shut down but abandoned, pipe removed and holes plugged. Gas depletion and shifting sands, which cause constant trouble and expense, have made pumping wells unprofitable in the Lomita area, which was marked by close drilling. East and west portions of the field, where big companies are successfully bringing in 1,000-bbl. wells, are not affected.

and subsidiaries for the first quarter of

June 10 ..... 47.63 May 6 ..... 49.59 Apr. 1 ..... 51.74

tween 100 and 200 bbls. of oil daily.

FULTON

High Pressure Governors for Manufactured Gas

Performance in numerous installations prove that the Duplex Sensitive Governor excels all others in simplicity and accuracy.

These governors are especially adapted for the requirements of manufactured gas companies, where the high pressure transmission system is in use.

They will reduce a high and varying inlet pressure to a low and unvarying delivery pressure within a small fraction of an inch.

Constructed of materials resistent to the chemical action of manufactured gases; all frictional surfaces eliminated; and the diaphragm surface increased to secure the utmost delicacy of regulation.

Action is positive and independent—no auxiliary regulators complicate operation. Designed for highest efficiency—no machinery to get out of order—nothing but ordinary valve wear experienced. Easily and quickly installed and needs little attention afterward.

SEND FOR CATALOG and details of this governor or any other pressure controlling device you may need.

THE CHAPLIN-FULTON MFG. CO.

Organized 1884—oldest builders of gas regulators in the country. Built in all sizes, from 1 inch to 24 inches; for all service, 1 oz. up to 1,600 lbs. pressure to square inch.

28-34 Penn Ave., Pittsburgh, Pa.

50

CRUDE CHANGES MORE THAN GASOLINE PRICES

(Continued from Page 32)

prices of petrol and of all commodities averaged, and that, moreover, petrol prices show a much smaller departure from the 1913 level than "other commodities." Fundamentally, the extremities of crude oil prices are due to the unique conditions of chance and competition under which the oil production business is carried on. The comparatively much smaller fluctuations and much lower average of gasoline prices are a direct consequence of the functions exercised by the great organizations of the oil industry.

Let us consider why in the petrol price cycles the amplitude of the waves is smaller, the ups and downs less steep, although the cycles are in general consonance with the trend of crude oil. Here it will be found that the great organizations apply an effective brake. While they cannot reduce the amplitude of the curve of crude oil prices, they can, in a measure protect the consumer from the full force of the waves. There are sound economic reasons why the great organizations can and do effect stabilization in gasoline prices at a lower level than would be possible for individual single-unit companies—why, in other words, they can afford to charge a lower price and take a smaller ratio of profit. Obviously, the organization which embraces all the correlated functions of production, transport, refining and marketing is the most efficient organization for the oil business. It is also the safest, that is from the point of view of eliminating risks, and risks are among the most expensive things in business. It minimizes the financial risks attached to each functional activity if it were carried on independently of the rest.

A single producer of the crude oil is at the mercy of the oil refiner when there is a surplus of the raw material. A single refiner is at the mercy of the producer when there is a shortage of the raw material. The mere merchant is at the mercy of both at all times; indeed, few merchants can ride the waves of the oil price cycles and live. The violent price storms of the oil industry can only be safely weathered by the great organizations. That is why—by the law of survival of the fittest—they largely dominate the marketing of oil products. How does this benefit the oil consumer? In the first place, they can ensure continuity of supply and economy of distribution. An oil field, it must be remembered, is a wasting asset and so-called profits often represent a mere return of used-up capital. A prudent company must be continually seeking to reinvest this capital so as to secure new reserve sources of supply. It is financially unsound, if not impossible, for a single-unit producer to attempt to acquire and develop reserve oil fields out of the surplus earnings derived from the one oil field.

Only the organizations with surplus earnings derived from many oil fields and with large capital resources can afford to undertake the risks incidental to the acquisition of reserve fields, perhaps in remote corners of the globe, where the expenses of colonization, of providing means of transport, of educating labor, and so on, are part and parcel of the expenditure on drilling. Economy in distribution follows from a world-wide distribution of sources of production. The distribution of oil to the world's markets cannot, in fact, be economically handled unless the world itself be regarded as a pipe line. Any particular market must be fed from the nearest section of the world pipe. It is not generally an economic proceeding, for example, to ship oil half round the world to a refinery in one consuming center, and then reship the refined products, surplus to that market, to other consuming centers. Apart from the additional transportation costs, the oil is handled four times instead of twice. But with refineries situated at or near sources of production widely distributed round the world, the great organization can ship refined products direct to the nearest points of consumption and let the surplus flow on to the next nearest point at the minimum of expense. If there be a surplus in one part of the world it can move the surplus to another where there is a deficiency, but those are the only conditions under which it allows its oil to take long journeys and accumulate transportation costs. Another factor which makes for some stabilization is in the holding of large stocks. This involves large locking up of financial resources, not only in the products themselves but in the special storage installations in which alone oil can be stored.

Need for Research

"Finally, I should like to draw attention to the not irrelevant fact that the great organizations fill perhaps one of the most important functions in the economic world—the function of research. It is a function which small companies cannot afford. The great organization with which I am most familiar has for many years pursued a very active policy of scientific research. It has not always been easy to place the results in the hands of the public, but one perhaps rather notable result has been the revolution in our conception of what are the valuable properties in motor fuel. I remember the day when specific gravity was supreme. Later we got as far as observing the effect of putting the stuff into a flask and boiling it. Today we know that neither of these observations is of much help towards determining the value of motor spirit, and that until you know the chemical constitution of a motor fuel you cannot say what its value will be in the engine. But it is interesting to notice that the spirit which 10 years ago was sold as No. 3 in this country was found to be the best spirit which had ever so far been produced for running an aeroplane or a motor car, and when, as a result of this exact knowledge, it was decided to call this our No. 1 spirit, we found that the demand for No. 1 spirit, which had previously been, I think, only 40 per cent of the total demand, rapidly increased to 60 per cent, and is, I believe, still today increasing. That is only one result of research which has had the most far-reaching economic consequences; but apart from such big results there are, of course, innumerable small improvements in the processes of refining and blending and distilling which are taking place every day, all of which tend to provide the consumer with better and cheaper products.

Not Worrying for Oil

"There are those who talk of the ultimate exhaustion of the coal and oil supplies of the world, and ask what we are then to do for power. Sometimes those who are trying to look far ahead suggest that there should be greater conservation. Personally, I have little sympathy with these peerings into the far future. Each generation must, after all, largely take care of itself, and if one reflects that anyone trying to estimate the future sources of power in the world 60 years ago would have left oil entirely out of his calculations, that is enough to make one realize the futility of cramping development in our generation in the hope that we may benefit a future one. For instance, we know already that there are large intra-atomic forces that are inherent in the properties of matter but which have not yet been tapped, and who knows in the far distant future these may not provide a far greater source of power than those on which we are now depending? I hope I have shown that at any rate in this generation the great oil organizations are playing their part and serving not only the industry but also the whole community in no small measure.

The chairman, Mr. Herbert Barringer, president of the Institution of Petroleum Technologists, said the author had shown very clearly how prices were controlled. No doubt when the price of petrol went up everybody grumbled, but it really appeared to be a blessing in disguise, because the large oil distributing companies acted as a buffer between the violent fluctuations in the prices of the crude oil and the products from them which were required by the public.

Dr. A. E. Dunstan, in opening the discussion, said he desired, as the senior member of the Council of the Institution

We Take Balls and Seats Seriously

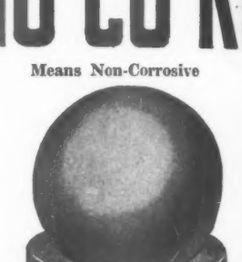
Maybe that's Why NO-CO-ROs Give Such Extraordinary Service

Frankly, we can't understand it. With so much depending on the life and operation of the ball and seat of a pumping well—and such a slight difference in cost between the best and the worst—why should any operator be satisfied with anything less than the best?

We take the ball and seat question so seriously at the Norris plant because we realize how quickly the small "savings" of an inferior article are eaten up by the troubles that it gives. Excessive pulling costs, inadequate production and frequent replacements are just a few of the evils for which "cheap" balls and seats are responsible.

NO-CO-RO

Means Non-Corrosive



Balls and Seats

—are backed by 17 years of integrity and experience;

—are made of an alloy steel specially compounded to resist rust, corrosion and pitting, no matter how severe the sand and salt water condition;

—are tested **three times** before shipment, assuring a perfect article every time;

—frequently last 10 to 12 months in wells that once required changing every 2 to 3 weeks.

The coupon below can be filled out in half a minute. It may mean important savings for years to come.

Manufactured by
NORRIS BROS., Inc.
Manufacturers of Oil Well Pumping Equipment
Robinson, Ill.

NORRIS BROS., Inc.
Robinson, Ill.

Send us prices and details of NO-CO-RO Balls and Seats. Send us copy of your new catalog.

(Name).....

(Address).....

122

of Petroleum Technologists, to say the feature of the paper which appealed to him most of all as an economist was the part in which the author referred to the activities of the great oil associations in connection with research. It was almost a truism to say at the present time that the extent of civilization could be measured by the consumption of sulphuric acid. In a similar way the activity of a great organization could be measured by the extent of its investigation work. A few illustrations of that came to his mind. There was, for example, the work done by the General Electric Corp. in America. Among the men in the employ of that company were investigators of the caliber of Langmuir, whose scientific work had revolutionized the views held on atomic physics, and incidentally had thrown great light on the phenomena of lubrication. Then there was the great Kodak organization which, in the course of the war, turned its activities towards the manufacture of fine chemicals, the supply of which had been cut off from America. In the author's own organization valuable work was done by Ricardo in the elucidation of the chemistry of the internal combustion engine. Quite recently General Motors, of Detroit, had published the results of Midgley's long investigation on the ante-detonating properties of gasoline. All those examples illustrated the author's contention that it was the great organizations which had the capacity, the means, the ability and the tenacity to carry out great schemes of investigation. The smaller concerns could not possibly tackle the problems. Not so many years ago research in industry was a sort of hunting after trade secrets and small details in process which were jealously guarded. At the present time the great organizations set the pace to the universities. The importance of research in industry was, to his mind, one of the most valuable features of the paper.

Pooling Geology

Mr. A. W. Nash said the system of letting small leases to all and everybody on an oil field was one which was greatly to be deplored because it encouraged the formation of very small companies, often with a trail of still smaller subsidiary companies behind them, with little working capital and less still of science and skill. At the commencement of operations there was a feverish desire to get down to oil, but after a certain depth had been drilled it was discovered that oil, being a migratory and most elusive fluid, was not where the geologists hoped it would be. That resulted in fresh exploration having to be undertaken, which was usually done by the bigger oil companies while the smaller companies sat on the fence. If the smaller companies were prepared to remain on the fence all the time, so much the better, but when oil was discovered in another area there was another wild rush to sink bore holes, with the result that the bigger companies were compelled to adopt the system of offset drilling, which often led to the ruination of an oil field very quickly. Oil sands were passed through without any regard to protection from water and flooding. Perhaps the portion of the field in which drilling was taking place might not be of value to the owners of the property, but it might be of value to owners in others parts of the field, with the result that the field was flooded and eventually ruined. One point he desired to raise with regard to bigger companies was the question of pooling of geological information. In cases in which a number of organizations were working together he would like to see a central geological station opened, or if that was not possible for commercial reasons an interchange of information, so that each problem was treated as part of the whole and not as the whole itself. Every ton of oil which was left below ground had just as bad an effect on the market as every ton of oil which was left unloaded on an already swamped market. Another statement which was often circulated in the papers was that well No. so-and-so had come into production and that the well was under control, whereas very often the control only applied to the direction of the flow and not to the production itself. Everyone knew that to allow a well to give its maximum quantity was just as bad as a workman giving his maximum strength for the first hour of his shift. The average yield was not nearly so great. The feverish desire to get oil to the surface in large quantities caused as much harm to the industry as offset drilling and carless drilling simply with the object of reaching oil before one's neighbor was able to do so.

Sir Robert Waley-Cohen, in reply, said he thought great progress had been made in the direction of the pooling of geological information. It must be remembered, however, that geologists did not always find themselves able to take the same view of a particular field. One geologist might think that certain steps were necessary, and another thing that such steps were foolish, and that quite different steps were necessary. When people were seriously working together in a field at the present time, there was a tendency (and it certainly was the policy of the great organizations) for the geologists to meet together and exchange such information as they possessed.

SET EXAMINATION FOR PETROLEUM CHEMISTS

The United States Civil Service Commission announces an open competitive examination for assistant petroleum chemist.

Receipt of applications will close August 5. The examination is to fill a vacancy in the Bureau of Mines, for duty at Midwest, Wyo., and vacancies in positions requiring similar qualifications, at an entrance salary of $2,400 a year. Advancement in pay may be made without change in assignment up to $3,000 a year.

Applicants must have been graduated with a bachelor's degree from a college of recognized standing, such degrees requiring the completion of at least 118 semester credit hours, of which at least 30 semester credit hours must have been in chemistry. Applicants must have had at least two years of experience in work of either a research or technical character in petroleum chemistry, which experience must show that degree of progress necessary. One year of graduate work, including the completion of 30 semester credit hours, the major part of which must have been in petroleum chemistry, will be accepted in lieu of each year of the required experience.

The duties consist of general research in connection with petroleum and its products.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, experience, and fitness; and publication or thesis to be filed with the application.

SALT CREEK FIELD SUIT

CASPER, Wyo., July 5.—The lawsuit instituted in the Federal Court at Cheyenne some months ago by Henry A. Miller against the Midwest Refining Co. and affiliated concerns, which claimed for Miller much of the valuable land in the Salt Creek Field by reason of old placer claim titles, has been withdrawn by Miller and another suit instituted against the Consolidated Royalty and other holders of tracts. No date has been set for the hearing.

DEEP TEST IN SALT CREEK

CASPER, Wyo., July 5.—In the Salt Creek Field there is considerable drilling but few completions out of the ordinary, the first and second sand areas are now well defined and measured so that a definite knowledge of the amount of oil that will eventually be had from these two horizons has been arrived at. The Lakota and third Wall Creek sands are still unknown quantities, as are the Sundance, Embar and Tensleep. The Midwest is starting two deep tests that may be carried to the Tensleep in order to find out what is doing in these lower horizons and the result will be a great interest to all Wyoming oil men.

METERS

For Measuring Production and Distribution of

Oil–Gasoline–Gas

and Other Fluids

PITTSBURGH METER COMPANY

General Offices and Works:

7800 Susquehanna St., PITTSBURGH, PA.

SALES OFFICES:

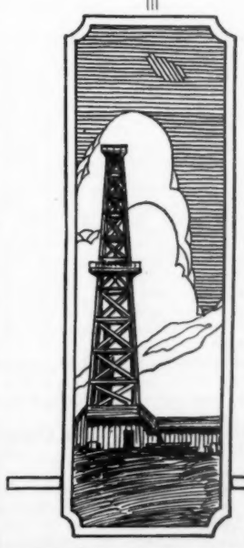
New York—50 Church St.
Chicago—5 South Wabash Ave.
Kansas City—Mutual Bldg.
Columbia, S. C.—1433 Main St.
Seattle—4038 Arcade Bldg.
Los Angeles—Union Bank Bldg.

"Spengler"

The fact that we own the basic patent on the Double Barrel Core Drill, in no way influences our price to the operator.

Since entering the field, the Spengler Core Drilling Company has brought the cost of core drilling down more than 50%.

Spengler Service Leads Them All!



SPENGLER Core Drilling Co.

LOS ANGELES, CALIF.
1030 A. G. Bartlett Bldg.
Phone Met. 7714

TAFT
Phone
Main 81

TORRANCE
2013 Arlington
Phone 140-J

LONG BEACH
Elm & Frankfort
Phones 618-399-653-474

877

OIL TREND IMPROVES SAYS CALIFORNIA S. O.

In an official statement, Standard Oil Co. of California says the period of overproduction in oil is passing and that "we seem to be on the threshold of another phase." It continues:

"Production is falling. Shipments to the Atlantic and elsewhere are about half what they were last July. The demand for petroleum is good, consumption great, the large daily surplus production of crude oil that existed less than a year ago has disappeared. Supply and demand are approximately in balance. Barring the discovery of prolific new fields, therefore, the industry in California must again draw on its reserve stocks."

Pointing out that the new oil business is one of feast and famine and of great transitions and changes, differing in these respects from most other industries, the company emphasizes the further fact that the source of supply of crude oil is constantly shifting. "Fields of oil are found, are developed," it says, "the volume of production ascends and then dwindles. New fields, in new places—in other States, even in other countries—take the place of the old. There is no certainty about it all, either as to the location of new fields or as to the volume of oil. And each time a new field is found the industry must build, quickly, facilities for handling the new oil—new pipe lines, new tanks and reservoirs, often new refineries, at the new points of output. This has happened over and over again in the history of oil. To meet these situations and emergencies requires great resources by way of organized personnel, and lots of ready money."

The Bulletin then instances the quick change which took place in California, from a situation in 1920 when consumption was in excess of production, creating a shortage, to a condition soon after in which production ran far ahead of consumption by reason of newly developed fields in southern California. "In July of 1923," it says, 'the surplus over the normal demand of California refineries for petroleum reached, it is estimated, the remarkable total of 401,000 bbls. a day. Of this, 207,000 bbls. were shipped to the Atlantic Coast and elsewhere through the Panama Canal, and 194,000 bbls. a day were put into storage in California. The month was typical of the period. The condition of surplus continued through 1923 and into 1924, until the tanks and reservoirs of California now hold a total of about 97,000,000 barrels of oil."

There has since been another change in the California oil situation, production showing a steady decline and causing curtailment in the shipments of oil to Atlantic and Gulf Coast ports.

SEMI-ANNUAL REVIEW

The 1924 Semi-Annual Review of the Petroleum Industry will be published on July 31.

It will contain a vast wealth of expert information covering every activity of the producing, refining, marketing and exporting ends of the industry.

It will be presented in such form that the detailed facts and figures will be easily available to the reader.

Thousands of readers will refer to it constantly, thus providing an excellent advertising opportunity.

The Oil and Gas Journal has the greatest Petroleum Publication Classified Section in the world.

It was elevated to its high position of respect, because of its absolute merit in helping the men of the industry.

Producers, refiners, marketers, pipe lines and exporters study the Classified Wants Section every week. Why not place your advertisement where they see it?

Mail your advertisement this week so that you will be absolutely sure of having your wants listed in the Semi-Annual Review. It will help you.

The cost is reasonable. Turn to the Classified Section for prices.

PRICE OF LULING CRUDE ADVANCED TO $1 PER BARREL BY MAGNOLIA

LULING, Tex., July 5.—The Magnolia Petroleum Co. advanced its price for crude in the Luling Field to $1 per bbl. on July 1. The Magnolia was obliged to do this to get any crude as its contract with the United North & South Oil Co. had expired and for the past week it has been running only 1,800 bbls. a day, its own production.

The Magnolia's production has fallen off about 1,200 bbls. a day of late. The Magnolia pipe line is laid for about 130 miles. The Mutual pipe line, which is owned or controlled by the same interests that own the United North & South Oil Co., is running all the United North & South oil from the Caldwell County side of the field, over 12,000 bbls. a day, and has been running a little over 3,000 bbls. a day from the Guadalupe County side.

The United North & South Oil Co. has up to July 3 delivered 1,842,172 bbls. to the Magnolia Petroleum Co.

The Atlantic Oil Producing Co. has been running 26,358 bbls. a day. Its contract with the United North & South is about completed. Up to July 1 the Atlantic had run about 1,460,000 bbls., purchased from the United North & South Oil Co.

Recent Completions

Recent completions in the field include the Danciger Oil & Refining Co.'s No. 5 Heneager, which was good for 1,450 bbls. of pipe line oil which makes the Danciger production about 2,900 bbls. a day. The Grayburg Oil Co.'s No. 7 McKean was making 8,000 bbls. of fluid, 20 per cent water, at first, later increasing to 40 per cent. The J. K. Hughes Development Co.'s No. 15 Allen came in at 5,500 bbls., falling off to 4,400 bbls. This well produced clear oil at first but now is showing about 2 per cent b. s. which is expected to increase rapidly. The Texas Co.'s No. 8 Allen was a disappointment. The top of the lime was found at 2,050 feet. After the plug was drilled the well showed about 100 per cent water. Other wells have done the same but later, when drilled a little deeper, a pay streak was found, the water shut off and the wells developed into good producers, so The Texas Co.'s well is not hopeless.

The United North & South Oil Co. recently completed a number of wells. Its No. 16 J. E. Allen got sand at 2,095-2,109 feet and its initial production was 1,900 bbls.; No. 14 Allen, sand at 2,048-2,105 feet, 1,500 bbls.; No. 5 Stair, sand at 2,122-61 feet, 250 bbls.; No. 8 McKean, 2,089-2,110 feet, 600 bbls., 15 per cent water; No. 8 Alf Mercer, sand at 2,137-75 feet; 500 bbls.; No. 9 Marines, sand at 2,113-24 feet, 800 bbls.; No. 47 I. P. Baker, sand at 2,038-75 feet, 1,500 bbls.; No. 3 Baker, sand at 2,096-2,105 feet, 800 bbls.

On the Allen A tract the United North & South Oil Co. has two wells producing from the 1,800-foot sand. No. 8-A is good for 1,500 bbls., but No. 10-A is a small producer. This production is coming from a seepage in the fault and it is expected that they will both be drilled to the regular pay in the course of time.

The recent new production about offsets the rapid decline on some leases. The Texas Co.'s Allen lease has fallen off from 3,000 bbls. to about 800 bbls. and the Magnolia's production on the Schubert is off about 1,200 bbls. a day. The Texas, Magnolia and J. K. Hughes Development Co. are arranging to put their wells on the Guadalupe side of the field on the pump.

The production in the field by company for the past week, not including a few of the wells most recently drilled, was as follows:

Production of Luling Field by Company

	Bbls.
Guadalupe County—	
Caldwell	160
Evans	80
Grayburg Oil & Refining Co.	2,224
Jarmon	300
Magnolia Petroleum Co.	850
Midwest-Texas Oil Co.	30
Phillips Oil Co.	108
Pydal Oil Co.	180
Prairie Lea Oil Co.	304
Sunland Oil Co.	250
Rio Bravo Oil Co.	629
United North & South Oil Co.	9,780
Caldwell County—	
United North & South Oil Co.	18,950
Danciger Oil Co.	1,540
Grayburg Oil & Refining Co.	1,471
Magnolia Petroleum Co.	982
Texas Co.	857
Thorman et al	27
J. K. Hughes Development Co.	5,157
C. C. Cannon	200

Pipe Line Runs

The average daily pipe line runs from the field were as follows:

Grayburg Oil & Refining Co.	4,167
Magnolia Petroleum Co.	1,830
Elliott & Jones	629
Mutual Pipe Line Co.	15,354
Atlantic Oil Producing Co.	26,358
National Petroleum Co.	890
Texas Co.	903
Total	50,131

Checking up Properties

Since the United North & South Oil Co. advertised its big property in the Luling Field for sale several companies have had representatives in the field checking up the leases and wells of the company and overtures have been made for the purchase of the property. It is reported here that the company values its holdings at $30,000,000. This valuation is not based on what the company clearly has in sight and what it expects to get out of the Edwards limestone which lies at 2,080 to 2,100 feet, but what it believes lies in the Glenrose lime below 4,000 feet. It has drilled three wells to the deep lime and has had showings of oil sufficient to warrant further exploration. The high valuation placed on the more than 20,000 acres of leases and the 30,000 to 40,000 bbl. production of the company is not concurred in by the companies which have been looking the properties over and the prospective buyers and the owners are so far apart on their ideas of values that this far there had been no opportunity of effecting a deal.

The general report on the Luling Field carried in The Oil and Gas Journal May 15 covered the history of the field and its characteristics. At that time the field produced about 39,000 bbls. a day. The newer part of the field west of the river has been the scene since of operations which have greatly increased the production which in June averaged, based on pipe line runs, close to 47,500 bbls. a day, with a minimum of 42,000 bbls. and a maximum of 52,000 bbls. in round numbers. The average for the week ending July 3 was 50,130 bbls. a day.

Up to June 10 it was estimated that the field east of the river had produced an average of 5,500 bbls. a day or a total of 5,000,000 bbls. and the field west of the river 5,000 bbls. per acre or 1,500,000 bbls. Outside estimates of the total potential production of the field from the Edwards lime run around 25,000,000 bbls. The recent discovery of production in the sand lying above 1,900 feet, which heretofore had been regarded as a gas sand gives a new angle to the outlook on the possibilities of the territory.

The lifting cost in the field has increased somewhat. It was around 6 cents a barrel in April but now it is 10 cents a barrel. The crude on the east side of the river is 28 gravity and on the west side 27 gravity.

Magnolia's Big Investment

Outside of the United North & South Oil Co. the heaviest investor in the field is the Magnolia Petroleum Co, which is rapidly completing an 8-inch line from Hull to Luling. The company has about 2,500,000 bbls. of crude in storage in the Luling Field. It is believed here that the Magnolia, with its big investment in pipe line and storage would be the logical purchaser of the United North & South Oil Co.'s interests could the two companies come together on price. As matters stand at present the other buying companies in the field are beating the Magnolia out as buyers. The Mutual pipe line, which is owned or controlled by the same interests that own the United North & South have an 8-inch line to the west side of the field and a 6-inch line to the older east field and is running a large percentage of the production. The lines run to a big loading rack on the Southern Pacific and the oil is conveyed thence to Houston by tank car. The Atlantic Oil Producing Co. is also a large buyer of crude on contract which will expire in a few days and it looks like a free for all fight for the oil thereafter. The Humble Oil & Refining Co. has bought 200,000 bbls. on contract and the Rio Bravo Oil Co. (Southern Pacific Railroad) has purchased 100,000 bbls. recently, the latter contract being at $1.10 per bbl.

NORTH TEXAS MARKET WAS UNSATISFACTORY

FORT WORTH, Tex., July 7.—Prices on refined oil products, showed a little slump in the North Texas district, with demand and inquiries less active. All grades of gasoline declined from ¼ to ½ cent with the exception of natural gasolines which are scarce and showing some strength, with little available for immediate shipment. Fuel oil is being juggled about a bit, ranging from 80 to 90 cents a barrel, sells' cars, at the Wichita Falls refineries. Kerosene is steady. Gas oils are scarce with prices firm.

New Navy gasoline is not showing much strength, with more being offered for sale than buyers are requiring. These offerings had the effect of lowering the prices from ¼ to ½ cent, with the top price ranging from 8¾ to 9 cents. Following the decline in New Navy, 64-66, 375 end point gasoline weakened, with the quotations off ¼ to ½ cent a gallon; no large orders are reported as being placed and small ones were not numerous, with sales being made at 10¼ to 10½ cents.

Natural gasoline did not decline in sympathy with the other light oils, with only a small amount available for immediate shipments, the prices are 7¼ to 7½ cents for Grade A, Grade B, 7 to 7½, and Grade C 7 to 7¼ cents. Kerosene is showing the effect of the off season and the prevailing price was 4 cents flat for water white.

Fuel oil is irregular. Orders were scarce for local consumption as development work is being slowed up.

Gas oil is practically out of the market, available to fill even small orders, probably 2¾ cents should be recognized as the market price, though 3 cents was offered for immediate delivery and no stock could be secured. Compared with last week the market was disappointing. No orders were placed by exporters and local demands declined.

ALLEGANY FIELD FIGURES

Figures for the month of June on completions, production and new work in the Allegany Field were received after the summary on page 62 of this issue of The Oil and Gas Journal had been printed. The figures for this field follow: Completions, 21; production, 40 bbls.; dry, 1; gas, none; rigs, 17; drilling, 25; total operations, 42. These figures should be added to the total for all fields east of California, making these totals as follows: Completions, 2,081; production, 225,631 bbls.; dry, 461; gas, 187; rigs, 1,126; drilling, 4,378; total operations, 5,504. The Eastern Field totals should read: Completions, 397; production, 1,470 bbls.; dry, 53; gas, 74; rigs, 161; drilling, 401; total, 562.

CARS IN CHICAGO INCREASE

CHICAGO, July 7.—The report of the City Collector for Chicago shows that the number of licenses to all classes of motor vehicles during the first six months of 1924 exceeded those of the entire year of 1924. For the first six months of 1924 the collections amounted to $3,574,170, against $3,022,831.50 for all of 1923. The number of passenger autos licensed by the city during the six months ending June 30, 1924, was 226,699; of light trucks 26,939 and of heavy trucks, 14,914. This is an increase over 1923 of 13,259 of the passenger cars and approximately 1,800 delivery cars and trucks.

Gasoline Stocks Are Not Excessive, Says New Jersey Standard

Standard Oil Co. of New Jersey says that while gasoline is plentiful stocks are not noticeably larger than they should be. Present stocks of finished and unfinished gasoline amount to 105 days' supply at the current rate of consumption. According to its statement this is to a day exactly the same as the reserve supply a year ago. Crude oil is somewhat out of line as compared with a year ago.

In a statement in The Lamp, the company's publication, it is pointed out: "Crude oil stocks are standing at one of their frequent humps, the nature of the crude oil production problem being such that humps and hollows make up the tenor of its existence.

"For the most part, the producer of crude oil has failed to take into his reckoning the changed methods which have resulted in the larger recovery of gasoline. He has proceeded on the basis of the old figures, applying the former percentage of light naphtha products obtained from the raw material to production and figuring, on that basis, the need for a larger amount of crude than is actually required with the higher efficiency of the pressure stills.

"The remarkable increase in efficiency shown by the new methods, with still further increases in yields in sight, means that the refiner has successfully overcome the bogy of a gasoline shortage. In future, he will work on a wider margin between the barrels of crude oil produced and the requirements of some 16,000 000 motor cars. Development of the cracking process means that a real curtailment in crude oil production could come without endangering the fuel supply of our automobiles. That is the real significance of 54 000.000 barrels of gasoline this summer; it is tangible evidence of the industry's ability to increase production when it shall be needed."

With regard to the suit brought by the Attorney General of the United States against 50 of the foremost oil companies, of which Standard Oil Co. of New Jersey is one, the company has this to say on cracking processes, the alleged pooling of which forms the basis of the litigation:

"The public does not understand or appreciate the benefit that it has derived, first from the development of the cracking process, and second from the willingness of the owners of the patents involved to have other refiners make use of them. Had the patenteees followed the course which is contemplated and permitted by the constitution and patent statutes, and restricted the use of patented improvements to their own plants, the country would have experienced a shortage of gasoline long since, with a consequent advance in price far and away above any addition which has been due to the payment of royalties. Because the owners of these patents have made the new processes available to all on reasonabel terms, the percentage of gasoline recoverable from a barrel of crude oil has been increased two and one-half times, and the world's enlarged requirements met."

PACIFIC COAST HAS LARGER CONSUMPTION

LOS ANGELES, Cal., July 5.—Weather conditions are continuing favorable to increased local consumption of gasoline on the Pacific Coast. In the major marketing centers prices are being well maintained. In the Los Angeles territory alone are there any signs of weakness. This weakness is not so apparent in the city itself as in some of the suburbs and nearby towns. Some of the marketing prophets are predicting another price war such as was waged in this territory last summer and fall. The coming of such a war is by no means certain, but there are certainly many factors which would make it possible. The two main factors are a combination of a large number of independently operated service stations who are always willing to buy where salable gasoline can be obtained at the lowest price, together with a large supply of natural gasoline manufactured by a considerable number of independently operated plants with poor marketing connections. Much of this natural gasoline is weathered at the plants or has its light end removed by redistillation, the heavier residue being sold directly through stations. The economic feasibility of this is apparent when it is considered that gasoline is selling at service stations in and around Los Angeles at 17 cents per gallon before State taxes, whereas, natural gasolne of very good quality can be purchased at plants located within easy trucking distance of the city at 10 cents per gallon. There are many jobbing trucking concerns who will haul this material from the plant to centrally located stations at anywhere from ¾-cent to 1¼ cents per gallon.

Engine distillate sales are negligible in quantity. The use of this commodity by fishing boats, tractors, and pumping engines is being more and more restricted in favor of gasoline. Practically all the engine distillate now being manufactured is being used as a blending stock in order to prepare high gravity natural gasoline for use in motor vehicles.

The kerosene market is extremely soft and narrow. The heavy distillates such as stove oil, furnace distillate and gas oil, are moving in rather small quantities at prices slightly above that of fuel oil. Quotations on these commodities range from 3¼ cents to 4½ cents per gallon. The one reliable outlet for products of this type is in the artificial gas industry which on the Pacific Coast consumes an ever increasing quantity despite the large natural gas resources of central and southern California.

Lubricating oil prices are being well maintained at the level established during the past month or so, although contract buying is not as great as might be desired. The volume of sales is very satisfactory, due to the summer automobile traffic, but it is generally recognized that this volume will end with the summer.

Fuel oil as usual is firm. With the exception of some supplied on very large and long term contracts, this commodity is bringing $1.40 per barrel to seaboard at California ports.

29 POOLS PRODUCE 68 PER CENT OF CRUDE OIL OUTPUT IN MAY

There were 29 major pools in the United States in May. By major pools is meant those that averaged 15,000 bbls. a day for the month. Of the total of 2,009,838 bbls. per day produced in the United States in May the 29 major pools produced 1,369,661 bbls. or 68 per cent of the total. In January the major pools numbered only 24 and the total production of these was 1,286,724 bbls. out of a total daily production in all fields of 1,903,966 bbls. or 68 per cent of all the production.

A study of the figures in the accompanying table will be interesting. In California, for example, fields that were not permitted to produce much in January were pouring out a large volume of crude in May. The Midway-Sunset Field, which produced 84,612 bbls. in January had increased to 104,308 bbls. in May. The new Torrance field increase from 31,363 bbls. to 57,538 bbls. in May. On the other hand the table shows a tremendous falling off in Santa Fe Springs and Huntington Beach.

In January the Coyote, Graham-Fox, Stroud, Cromwell and Luling fields were not listed as major pools but in May the five aggregated 109,054 bbls. a day which was 77,900 bbls. a day in excess of what they were making in January.

In addition to the 29 listed major pools there are a number that are knocking for admission. The Pettit Pool in the Hominy district, Osage County, Oklahoma, has reached the 15,000-bbl. mark but not for a sufficient length of time to give it a place among the top notchers. At this writing the Pettit Pool is producing more than 15,000 bbls. a day from a few wells.

AVERAGE DAILY PRODUCTION IN MAY OF THE 29 LEADING POOLS IN THE U. S.

	Jan., Bbls.	Feb., Bbls.	Mar., Bbls.	Apr., Bbls.	May, Bbls.
California—					
Midway-Sunset	84,612	95,179	97,313	99,137	104,308
Long Beach	218,646	219,013	196,922	175,844	166,854
Santa Fe Springs	138,006	105,742	86,540	72,713	69,351
Huntington Beach	64,088	59,835	55,906	51,362	48,584
Torrance	31,363	27,597	37,683	54,801	57,538
Elk Hills	22,406	36,942	38,358	36,697	36,857
*Coyote	4,177	3,795	4,065	15,325	18,814
Kern River	19,031	19,046	18,433	19,266	18,478
Coalinga	17,605	21,748	30,360	37,175	36,030
Montebello	17,965	18,542	16,849	16,624	16,745
Wyoming—					
Salt Creek	118,493	110,825	99,500	95,595	92,780
Oklahoma—					
Burbank	80,887	102,216	99,378	105,864	87,024
Bristow	42,605	47,119	47,534	45,666	43,411
Tonkawa	39,723	38,406	35,720	35,291	35,211
Cushing	23,369	24,086	24,115	24,410	24,716
Hewitt	20,008	20,411	19,825	19,769	20,727
Healdton	15,956	16,426	16,166	16,768	16,710
*Graham-Fox	14,514	15,626	17,462	20,062	18,905
*Stroud	2,125	3,910	4,463	5,944	16,456
*Cromwell	338	543	4,660	6,540	16,570
Texas—					
Powell	94,800	106,360	124,847	117,157	103,106
Mexia	34,708	34,737	33,809	32,955	30,612
Burkburnett	21,238	20,796	20,676	20,499	20,019
Holliday	20,368	24,410	27,178	33,616	33,851
Electra	19,908	19,088	19,335	20,122	20,711
Hull	18,596	28,512	24,984	22,084	18,385
*Luling	10,000	15,100	20,750	28,850	38,300
Arkansas—					
Smackover	101,361	97,650	104,814	113,265	140,127
Louisiana—					
Haynesville	21,882	20,640	19,806	16,715	18,481
Total	1,317,878	1,354,300	1,347,441	1,360,117	1,369,661

*Added to "leading fields" since January.

EMPIRE ANNOUNCES NEW BUYING POLICY

The Empire Petroleum Co., the purchasing organization for the Empire Companies in the Mid-Continent Field modified its plan of purchasing which it put into effect on July 1, the change being made on July 7. Following the announcements of the Prairie, Sinclair, and Cosden Companies, the Empire announced that it would prorate its runs from wells to a degree consistent with its available crude outlet. Later it announced that it would only buy 50 per cent of its runs, but agreed to store the remainder at 3 cents per barrel per month, the storage charge being cancelled should the Empire finally become the purchaser of the crude. It did not say what proportion of the total production of the leases it would run. It announced that it would not connect with any new properties nor purchase any part of the crude produced from new wells on leases to which it is now connected.

CAMP BEATY FOR TEXAS MEN

HOUSTON, Tex., July 5.—The Texas Co. has donated a tract of 112 acres of land to be used for a country club, golf course and recreational center by the employes. It will be named Camp Beaty in honor of Amos L. Beaty, president of the corporation. The site is on Green's bayou, 10 miles east of Houston and can be reached by automobiles or water. Two and four-room cottages will be erected.

South Dakota Paper Explains Effect of McMaster's Action

Showing what the "home folks" think of Governor McMaster's gasoline war in South Dakota there is the following editorial from the Aberdeen Morning American, published at Aberdeen, S. D.

"Independent oil dealers have announced another cut of 1 cent in the price of gasoline. This brings the price at service stations in Aberdeen to 21 cents per gallon, which the dealers claim is as cheap as they can afford to sell it while the wholesale price remains as it is.

"The price fixed by the State here is 18½ cents per gallon, but it does not include the excellent personal service given by the station men and the overhead is paid indirectly by the taxpayers.

"There is a question as to how far the State should enter into private business. All of us are glad to buy necessities as cheaply as possible. No man, whether Standard Oil man or independent dealer, should be allowed to rob the people, but as President Coolidge has said, all men are entitled to a fair profit.

"If the State can properly go into the oil business, thus driving out of business men who have made large investment and who have been rendering efficient service, it may as well go into the clothing business, the grocery business and eventually into farming business.

"The oil dealers feel that they are being discriminated against, that they are reputable, honest citizens, who have tried to fill a legitimate demand, and that for this purpose they have invested their capital in buildings and equipment to render good service. They say they cannot compete with the State which has all overhead paid by taxpayers generally and which has no taxes to pay. They believe, and the matter will be tested in the courts, that the State has no right nor authority to engage in such private business, as by so doing the taxpayer who does not buy gasoline is compelled to pay a portion of the expense of selling to those who do buy.

"If the oil dealers have learned a lasting lesson, and we believe they have, it would be well for the State to leave their business alone.

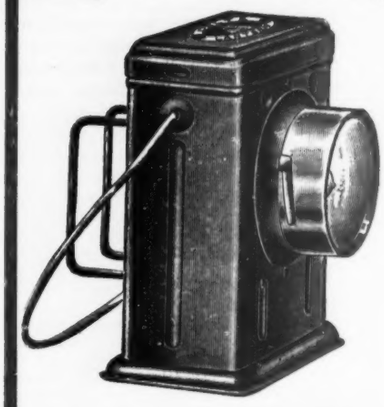
"The State price represents actual cost, with no overhead for rent, taxes, employes, etc. The difference of 2½ cents does not seem to be more than would be justified in any business which must pay these expenses and hope to make anything in the way of profit.

"The bad feature of the gasoline war has been that, while aimed at the big concerns, which were alleged to have dictated unreasonable prices, it has fallen hardest on a class of good, enterprising business men, who deserve to make a living just like other folks. If the State of South Dakota is going to start competing with its own citizens engaged in legitimate business, where shall we draw the line? It is all very well to smile at the plight of the service station men, but how would you feel if the State stepped in and ruined your business?"

EXTRACT OIL FROM COAL

The extraction of petroleum from coal by the low temperature carbonization process is the subject of the installation of a plant at Nottingham, England, conmake Nottingham a smokeless city (the merce state. The promoters expect to make Nattingham a smokeless city (the first in England), to furnish cheap gas and to reduce both waste and danger in the coal mines in addition to securing from 18,000 to 20,000 gallons of oil. Under present circumstances England imports oil to the value of 50,000,000 pounds a year. It is proposed to replace this supply as far as possible with the gasoline and other petroleum products which are to be separated from the small coal heretofore regarded as almost a waste product of the mines.

Spots Every Danger!



Delta No. 10 Electric Hand Lantern throws the most powerful, concentrated light of its kind known. It makes things plainly visible for hundreds of feet ahead. Built to stand rough usage.

Absolutely safe among explosives or inflammables!

DELTA NO. 10 HAND LANTERN

$2.75 COMPLETE, Less Batteries

Uses two ordinary dry cell batteries which last for months. You buy economy, safety and service when you invest in a Delta. At your supply house, or sent direct for $2.75, less batteries.

DELTA ELECTRIC COMPANY

Factory and General Offices: 110 Delta Block, Marion, Ind.

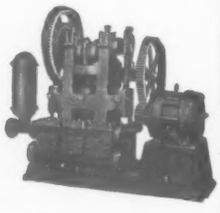
Standard Makers of Lanterns, Auto Spotlights, Motorcycle Spotlights, Radio Headphones, Bicycle Lamps, Flashlights and Flashlight Batteries

NEW YORK CITY, Export Dept., 30 Water St. — SAN FRANCISCO, Sanford Bros., 311 Minna St. — WINNIPEG, Bisset & Webb, Ltd., 126 Lombard St.

DEPEND ON DEMING—

Once installed, a sturdy Deming Plunger Pump can be practically forgotten save for the periodic fillings of oil and grease cups. Steadily and smoothly the powerful overlapping strokes deliver the liquid in a continuous, even flow. Day in and day out it works away without pause.

The exceptionally low cost of maintenance, the saving in power consumption, and the longevity of Deming Pumps make them a most economical selection.



Write for Catalog
The Deming Company
Est. 1880
Salem, Ohio

Western Oil Field Distributors
ATLAS SUPPLY CO.
Muskogee and Branches

Deming PUMPS
"Hand and Power Pumps for All Uses"

TOO MUCH LEGISLATING FROM THE WRONG END

(Continued from Page 24)

"cheap gasoline," then indeed is the petroleum industry in dire need of constructive relationship with our United States Senators.

It is obvious, especially to oil men, that any "regulatory" legislation that is based on a filling station acquaintance with the oil business is very liable to be highly dangerous to the petroleum industry as a whole.

It would be a legislative miracle if, after we had produced over 7,000,000,000 bbls. of crude oil and built up an industry worth $10,000,000,000, a Senate committee, made up in its entirety of men who do not know the oil business and who ignore its years of accumulated experience, could formulate legislation that would be fair, just and equitable to the industry.

There are two classes of people that are fundamentally interested in the legislation connected with any industry—and in this instance with the petroleum industry: First, the people that make up the industry itself—second, the people whom it serves. Nobody else can have a greater interest than these two groups—and any "regulatory" legislation that would be detrimental to the petroleum industry would, in the last analysis, be detrimental to those whom the industry serves.

Cannot Legislate Cheap Gasoline

It must be understood by the people of the United States as well as by our Congressmen, our State Legislators and our Governors, that we can't "legislate" cheap gasoline, if cheap gasoline is not an industrial fact.

Obviously then, if anything connected with the petroleum industry is to be "regulated" those who produce the crude oil, those who transport and store it, those who refine it and make it into finished products and those who finally deliver the finished products to the ultimate consumers, are best qualified to know the limits within which the industry works. These limits are industrial facts, and establish that final price which is fair, just and equitable to the industry. And what is fair to an industry is fair to those who buy its products.

To enact regulatory legislation that ignores and violates this basic principle underlying all manufacturing industries, would be sheer folly. There may be a wide difference between a price that is based on industrial conditions and a price that springs from a politician's fertile imagination.

The election certificate of no Senator or Representative carries with it a commission to assist in passing legislation that will profit the people and injure an industry—or that will profit an industry and injure the people.

As between industries and the people there is always a broad common ground upon which both can stand—a ground broad enough to give industry a just profit and the people an equitable service.

Regulating the Railroads

One of the results of the activities of the Interstate Commerce Commission, and the legislation connected therewith, is that our railroads are permitted to earn a "fair return" of 5¾ per cent on their valuation.

In 1922 the railroads of the United States had outstanding $7,275,000,000 of common stock, $1,800,000,000 of preferred stock, $11,243,000,000 of bonds and $1,972,000,000 of other funded debts—a total of $22,290,000,000.

How much of this gigantic sum of money could have been raised during the 50 years that the railroads of this country were struggling to grow, if some Governmental agency had stepped in and told the investors that furnished the $22,000,000,000 that they could have a "fair return" of 5¾ per cent on their money?

If there is today an investment of $10,000,000,000 in the petroleum industry, what would the price of gasoline have to be to enable the industry to spend $500,000,000 a year in drilling wells to "keep up its production"—tens of millions on pipe lines and storage in new

"Be Square Products"

Pioneers in the manufacture of High Grade Uniform Quality Western Cylinder Stocks known all over the world as

BIGHEART CYLINDER STOCKS

Bright Stock
Filtered Stock
Steam Refined Stock
Red and Pale Oils

Write, telephone or telegraph for quotations

Telephone Harrison 1586

Barnsdall Refining Company

Successors to Bigheart Producing and Refining Co.

910 S. Michigan Ave. CHICAGO, ILL.

New York Kansas City Los Angeles Tulsa
Refinery: Barnsdall, Ok.

HOUGH Seamless Steel Working Barrels are right in design; only the best of material is used—consequently they perform efficiently in all fields.

Your dealer handles them—ask for them by name.

The Charles N.
HOUGH
Manufacturing Company
Franklin, Penna.

OIL MAPS
TEXAS-OKLAHOMA
DISTRICT
CATALOG ON REQUEST
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

HEATH M. ROBINSON
GEOLOGIST
304 American Exchange National Bank Bldg., Dallas, Texas
Telephone X-2783

fields—millions on refinery replacement—millions on cracking processes—millions on marketing, and still have 5¾ per cent as a "fair return" on the aggregate value of the industry's properties?

And how much "new capital" could be secured for the petroleum industry if the prospective investors were told in advance that the Government would consider 5¾ per cent a "fair return?"

Proposed Oil Legislation

The petroleum industry is facing the certainty of attempted "regulatory" legislation when Congress convenes next winter—and there is every reason to believe that the proposed legislation will be formulated by Mr. La Follette. While the petroleum industry as a whole is scarcely mobilized to the point of having a defensive, Mr. La Follette, with political adroitness, is attacking the industry at the point where it comes in contact with 15,000,000 people—the filling station.

If the petroleum industry is to save itself from the present dangerous situation, from increasingly frequent "investigations" and from almost certain congressional legislation of some sort, it must take the initiative, and work from the oil field, the storage tank and the refinery, rather than from the filling station.

There are two great outstanding differences between the petroleum industry and all other industries: The method of finding new sources of supply of crude oil—and the reasonable balancing of stocks of crude oil and of finished products, with demand.

If our National and State legislators, our State officials and the users of petroleum products could get a clear vision of these two vital problems and their far-reaching influence in establishing the "fair price" for the industry's producucts, much of the present misunderstanding would disappear. This lack of understanding is one of the menaces of the present situation—and as a constructive relationship between our industry and our National and State Governments, and a sympathetic understanding of the industry's problems by the people, are vital to one and all, a National Petroleum Commission is suggested.

National Petroleum Commission

This commission would be the great common ground upon which the petroleum industry, the National and State Governments and the people would stand, and from which the industry would be assured a just profit and the people an equitable service—neither of which would result from price regulation by the commission, but both of which would result from the normal operation of industry.

This commission would naturally be representative of every branch of the petroleum industry and would cooperate with the proper departments in Washington in formulating an industrial program that would be the starting point in petroleum legislation.

This program would deal with causes, rather than with effects—with the basic conditions underlying the industry, rather than final prices—with fundamentally sound conditions in the producing and refining of crude oil, rather than the price of gasoline—knowing that right prices follow right conditions in industry.

In its haste to legislate, our Congress frequently neglects to investigate, and thereby unintentionally but surely gives industry "the hot end of the poker," leaving it to shift for itself—and make a profit if it can.

In order that the findings of this commission have the force of authority it should be created by Congress—and its membership isolated as far as is humanly possible from political interference.

Preliminary Committee Needed

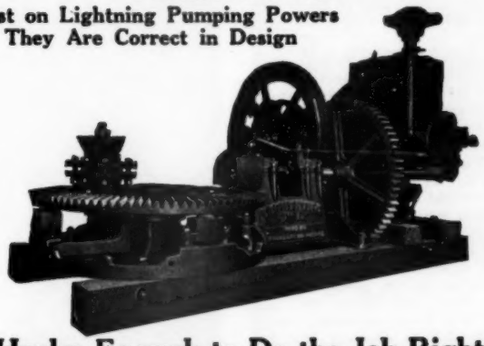
A National Petroleum Committee representative of every department of the industry, could be immediately created by the industry itself, to work out a basis upon which a National Petroleum Commission would be created next December and the general lines along which it would function.

The strategy of the Senate Committee

(Continued on Page 136)

LIGHTNING
OIL FIELD SUPPLIES
PUMPING POWERS, JACKS, STUFFING BOXES, ETC.

More Power—Less Vibration
Instant Service
Insist on Lightning Pumping Powers
They Are Correct in Design



Husky Enough to Do the Job Right
The reliable eccentric motion does away with jerky lines.
Built in three sizes:
No. 4—Belt Drive, weight 6,500 lbs. For deep wells.
No. 2—12 H. P. engine. weight 4,600 lbs.
No. 1—6 or 8 H. P. engine, weight 3,200 lbs.
Turntable gear is easily removable and having a broad face, coarse teeth and large diameter will stand up to the heaviest loads.
Shackle lines set low to the ground (13 in.) eliminate excessive strain.
Quickly installed.

Oil Field Supply Dept.
KANSAS CITY HAY PRESS COMPANY
Kansas City, Mo.

Larkin Improved Sand Pump
(PATENTED)

This illustration is the famous Larkin Sand Pump which is found in every oil field throughout the world.

Besides a full line of Drilling and Fishing Tools and Packers of all kinds and sizes, we manufacture the LARKIN Patent Never Slip Pipe Grip, which does away with the old-fashioned way of putting in casing with rope and tongs, and is less expensive, more durable and more easily handled.

LARKIN & CO.
Butler, Pa., U. S. A.

Old Dangerous Trail Over Big Horn Pass Avoided by New Road

THERMOPOLIS, Wyo., July 5.—The Big Horn Canyon road is now finished and the travel by car has abandoned the old dangerous trail over the Big Horn Mountain range by way of Birdseye Pass. The new road runs through the narrow canyon the Wind River cut through the range in past ages. The highway is on the east side, the Burlington Railroad on the west side and between the two the Wind River foams through as though fearful the high cliffs towering on either side might topple over and stop its flow.

The new highway passes through some of the most wonderful scenery in the West. Wind River or Big Horn Canyon is a narrow gash cut through perpendicular walls of granite rising 3,000 feet or more from the stream and at some points, the highway passes through tunnels cut in the living rock because the walls rise straight up from the water. Some confusion has arisen as to the correct name for the canyon. The Wind River rises in the Yellowstone Park country and flows southward to Riverton, then swings in a great easterly sweep and turns northward to pass through the Big Horn mountain range, continuing northward through the Big Horn Basin into Montana, where its waters mingle with other rivers to form the Missouri. When the Wind River enters the Big Horn or Wind River Canyon, it changes its name to the Big Horn River and many refer to the canyon as the Big Horn Canyon, though there is another canyon north of Greybull known by the same title.

The new road is a boon to the oil men, being a convenient drive from any point in Central Wyoming into the Big Horn Basin, where formerly the Birdseye Pass road was closed four to six months of the year with snow, and at its best, the Birdseye Pass route was a hard and wearing trip on car and driver. The travel of tourists is heavier this year than ever in the history of Wyoming. Cars from every State, Canada, and even Cuba, are to be seen at the commodious camp grounds and the towns and cities along the routes have provided excellent accomodations; hot and cold water, baths, gas for cooking, dining rooms and kitchens are usually to be found at every camping ground and this service is free in practically every instance though there is usually a small entrance fee charged at the gate of the camp grounds to keep out the hobo tourist. This particular type of traveler is becoming quite common along the main routes; he usually has a dilapidated Ford and is always out of gas or oil and running on paper thin tires. He is also broke and depends on the charity of other tourists to provide food and expenses.

There is also another type of traveler appearing in Wyoming that is not being welcomed with enthusiasm. A short time ago the oil fields of California were placarded promiscously with signs saying that Wyoming oil fields needed 10.000 men in the fields. As a result, many workers temporarily out of work there cranked up the flivver and hied themselves for this State. They are coming now in crowds, although there never was a demand here that was not well supplied by the regular workers. Many of these newcomers reach here in a poverty-stricken condition, having barely enough funds to bring them to their destination and their disappointment is keen when they realize the true state of affairs. Some of these travelers have not been able to buy tires for their cars and have made a substitute by placing a piece of bull rope inside the casing in lieu of an inner tube. This is a good example of the straits that some of the workers are put to through misleading advertisements.

Seven of these oil field workers were passed recently on the road leading from Casper to Colorado after they had spent three long weeks in Salt Creek and Casper in a vain search for jobs. They were nearly broke and what little money they had was obtained through one of the party securing work as a dishwasher in a restaurant. These men appeared to be good, clean workers and certainly knew oil field work from the way they answered questions.

CELEBRATES 85TH BIRTHDAY ANNIVERSARY

JOHN D. ROCKEFELLER

Mr. Rockefeller on Tuesday of this week celebrated quietly the eighty-fifth anniversary of his birth. He dictated a brief statement saying he was well and happy with his many friends about him and "had no special message except great gratitude for all his blessings."

NEW PURCHASING PLAN

Announcement has been made by the Johnson Oil & Refining Co. of Cleveland, Okla., that in the future the company will only take 50 per cent of its previous purchases from producers. The company offers to store the remaining 50 per cent or purchase it at a price 75 cents under the posted price of the Prairie Oil & Gas Co. the generally recognized posted schedule prevailing in that area. The Johnson Company operates a refinery at Cleveland. It is the first of the independent refineries to announce a purchasing plan of this character since the proration schedule announced by the Prairie Oil & Gas Co., which became effective July 1.

UNION CO. IN COLORADO

The Fort Collins Producers Corp. has been incorporated in Colorado by the Union Oil Co. of California to take over its Colorado operations. Authorized stock is $10,000,000, consisting of 400,000 shares of $25 par value, all owned by the parent company, except directors' shares. Directors are W. L. Stewart, John McPeak, W. W. Orcutt and Roderick D. Burnham of Los Angeles and Robert D. Hawley, Charles H. Sherman and John S. Schalk of Fort Collins.

Dissolutions Benefit Stockholders, But Not the Consumers

Dissolution of the old Standard Oil Co. of New Jersey added many millionaires to the country's long list, due largely to appreciation in value of the shares of the split up companies, says the Wall Street Journal. At the time of dissolution old Standard Oil of New Jersey shares had a market value of something like $500,000,000. Market value of the shares en bloc of the one time subsidiary companies must now be between $3,000 000 000 and $3.500.000,000. In other words, the old stock, since the dissolution decree was signed, has multiplied six or seven times, and, theoretically, so has the wealth of the Rockefeller family and other holders. Standard Oil of New Jersey, new, alone has a value twice as great as the old Standard Oil of New Jersey at time of dissolution.

Now, if the Government suit results in another split up of certain subsidiaries of Standard Oil, there may be another great multiplication of wealth. Dissolutions always seem to benfit the stockholder, but not the consumer. Recently an old Standard Oil man made the statment that if the Standard Oil Co. had been permitted to operate as a single unit products for the consumer would be selling much lower. Disintegration involved increased costs, which always means higher prices for products produced. Since Corn Products was dissolved the market value of its stock has increased twofold or more.

Shareholders of United States Steel might have fared better if United States Steel had lost to the Government, but consumers would have lost. There is untold wealth back of some of the subsidiaries of Steel, like Carnegie, American Steel & Wire, Illinois Steel, American Tin Plate, etc. The stocks of some of these subsidiaries have a book value of $1,000 or more a share. One could expect Steel common to soar close to its book value of $270 a share, which is an actual book value, if United States Steel were dissolved.

But steel prices would also soar. Proof that consumers are getting their steel at reasonable prices is evident from the fact that net earnings per ton of steel sold are less today than they were in the first few years of the corporation's existence. As an example, net earnings per ton last year were $12.20, compared with $16.25 in 1902. The big benefits from an expenditure of $1,200,000,000 for new construction, introduction of labor saving devices and an addition of $430,000,000 to working capital, have gone to the consumer and employe and not to the shareholder. United States Steel no doubt represents "big business" as the politicians term it, but it is the kind of big business that renders a big service to the public.

Up to the time the Standard Oil Co. of New Jersey was dissolved by order of the Supreme Court, the stock was concentrated in the hands of comparatively few. Since then there has been a wide distribution due to the many times the shares of the various former subsidiaries have been split up. It is believed, however, that the holdings of the Rockefeller family are almost as large as they ever were, although some of the stocks of less desirable companies may have been sold. Away back in 1882, the large holders of the old Standard Oil of New Jersey were: John D. Rockefeller, 191,700 shares; or about 27.40 per cent of the total capitalization of about $70,000,000 at that time. H. M. Flagler came second with 60,000 shares with S. C. Harkness a close third with 58,000. Charles Pratt owned 54,000 shares; O. H. Payne, 50,000; J. A. Bostwick, 34,000; William Rockefeller 32,000; W. G. Warden 29,400; Charles Lockhart, 27,200; W. C. Andrews, 19,800; H. H. Hogers, 18,200 and O. B. Jennings 16,300.

There are few survivors in this group, and no doubt there has been a large amount of stock hold for the account of estates. As an example, had William Rockefeller held his 32.000 shares up until the time of his death, the new shares exchanged for Standard Oil of New Jersey held by him would have been worth close to $100.000.000. On the same basis John D. Rockefeller's holdings would be worth close to $600,000,000. But it is well known that for the last several years thousands of shares of Standard Oil stocks held by the old Standard Oil regime have been passed to sons and daughters, this action being influenced largely by tax laws. In 1882, the 12 shareholders mentioned above owned nearly 85 per cent of old Standard Oil of New Jersey stock outstanding at that time. Incidentally, production of oil in the United States in 1882 was 83,150 bbls. daily compared with present production of 1,988,200 bbls. The ability of the country to consume present vast production of oil is due to the development of the automobile industry. In the year 1882 the automobile was an unknown quantity. The favorite outdoor sport was riding a "neck breaker," a bicycle with a big wheel in front and a little one behind, wooden spokes and steel tires.

ARGENTINE OIL PRODUCTION

Argentine petroleum production in 1923 totaled 2,613,860 bbls., from government wells; and 785,791 bbls. from private wells, a total of 3,399.651 bbls. This compares with production of 2,312,000 bbls. from government wells and 544,000 bbls. from private wells, a total of 2,856,000 bbls. in 1922. The Argentine Government is said to have contracted with an American company for construction of a petroleum refinery.

Telephone X-2783

The strategy of the Senate Committee
(Continued on Page 136)

McGREGOR

"The Working Barrel that Works"

Over fifty thousand now in use from Pennsylvania to Argentine and from Oklahoma to India wherever oil is produced.

No Barrel can compete with the McGregor in price. It comes with the barrel, valves, valve stem all complete at a price slightly more than what the old style Barrel would cost.

The only pulling done when you have a McGregor in use is the rods as the complete Barrel is fastened to the rods and comes out when they are pulled. TUBING PULLING is done away with as far as the Working Barrel is concerned. Use "Mac" Ball and Seat.

See your dealer or write us for circular

Patent

McGREGOR WORKING BARREL CO., Inc.
Sole Manufacturers
BRADFORD, PENNA.

Well Shooting By Experts

Call any of these men and have your well shot by an expert using the best material:

OKLAHOMA
TULSA OFFICE—Osage 6743.
Garage—Osage 1276.
D. A. Koons—Osage 6284.
W. H. Swartz—Osage 441.
J. A. Balcam—Cedar 2657.
Willis Hill—Osage 2289.
Fred Harris—Osage 441.
O. C. Eshleman—Osage 3065.
BARTLESVILLE—Robt. Camblin, 21.
DRUMRIGHT—Chas. Thiret, 424.
CLEVELAND—Gary Young, 154.
OKMULGEE—George Eba, 654.
DUNCAN—Lee Vandell, 217.
THREE SANDS—W. F. Knode, 826-F23.
WEBB CITY—Robt. Woods, 26.
BURBANK.

TEXAS
BRECKENRIDGE — Roy Richardson, 127.
RANGER—J. F. Tennyson, 126.
GORMAN—P. W. Burdette, 159.

We also operate stations at Bowling Green, Scottsville and Owensboro, Ky.

The Eastern Torpedo of Ohio Co.
611 First National Bank Bldg.
Tulsa, Okla.

Another Promising Well Near Artesia Eddy County, N. M.

ARTESIA, N. M., July 5.—The Illinois Producers' No. 3, located in the northwest of the northwest quarter of Section 32-18s-28e, Eddy County, south of Artesia, was shot last Sunday in 57 feet of sand topped at 1,946 feet. The hole bridged but the well flowed by heads and was estimated to be good for 500 bbls. a day or more. Later it pumped 200 bbls. a day through 2-inch tubing. The well is not yet a completion as the hole has to be cleaned out. The oil is 37 gravity. The same company's No. 2, in Section 25-18-28e, is a 4,000,000-foot gas well. The gas is being used to fire boilers at other drilling wells in the field. No. 1, the discovery well, is idle now.

The New Mexico Producing & Refining Co.'s No. 1, NE NE, Section 18-22s-27e; Pitcher Oil Co.'s No. 1 Cronin, SE SE, Section 12-28s-27e; Tri-State Oil Co.'s No. 2 Brown, NW NW, Section 14-28-26e and Tigner & Windser's No. 1 Keys, SE NW, Section 14-17-28e, are the other tests in this field.

MIDWEST COMPLETES SURVEY TO HOGBACK

SANTA FE, N. M., July 5.—The Midwest Refining Co. has completed surveys for its pipe line from the Hogback Dome to Farmington and is now closing the right of way. The line will consist of 3-inch pipe electrically welded and will have a capacity of 2,000 bbls. Two pumping stations will be required.

The Santa Fe Co. has spudded in on its No. 4 on the Rattlesnake Dome, Navajo Indian reservation, and is located 330 feet west of No. 3, which recently came in for 80 bbls.

The Santa Fe Mutual Oil Co. has suspended drilling on the Roberts well in 13 29-17, Hogback Dome.

Producers' & Refiners Carleton No. 1, on the Table Mesa Dome, has about completed its dirlling agreement on test to 3,000 feet and is awaiting orders. Laboratory for testing of crude petroleum and natural gas under the direction of the United States Bureau of Mines, Department of the Interior, at Laramie, Wyo., in connection with the State University, is now ready for work. It will be in charge of C. E. Reistle, Jr.

The California Co., subsidiary of Standard Oil of California, has rig up for No. 1 Floersheim, in 13-23n-24e, Floersheim ranch, 14 miles south of Springfield, Colfax County. The location is 65 miles southeast of the Union Oil Co. of California test to be drilled on the Vermijos Creek structure, south of the Colorado line, and will go through the Pennsylvania series.

Work has been resumed on the Hubbell-Bloomfield well in 14-28-11, Bloomfield mesa, 15 miles east of Farmington, which had a showing of 5 bbls of high gravity oil at 728 feet. The oil was mudded off until casing could be run to make a shutoff of surface water. The well probably will be shot.

H. L. Williams No. 1 is drilling at 825 feet in 20-32-13, northern New Mexico. No. 2 in 17-31-13 is drilling at 805 feet; No. 3, in 17-30-14, which had a good showing of wet gas, is held up by a fishing job at 1,105 feet. No. 4, in 30 30-15, has spudded in; No. 5, in 8-30-13, is drilling at 515 feet, and No. 6, in 5-30-13, is ready to spud.

The Union Oil Co. of California has shipped material from northern Colorado to Tercio, Colo., for its test to be drilled on the Vermijos Creek Dome, just south of the Colorado boundary in Colfax County, New Mexico, and drillers have also been taken from the Wellington operations to assume charge of the work. The test is on a structure embracing 18,000 acres with the 1,400-foot closing contour and the Dakota sand at 2,500 feet will be the objective.

Roy T. Clapp and associates have spudded in and shut down in 23-23-13.

RUSSIA TO INCREASE ITS EXPORTS OF OIL

Russia promises to export nearly 2,000,000 tons of oil in the coming year, compared with half that amount in the present 12-month period, according to a report of the Lomof Head Oil Syndicate before the State Planning Committee. Total production in the coming year, according to the report, will be upward of 7,000,000 tons, against 6,000,000 this year. The new figure will be about three-quarters of the pre-war production.

A representative of the Treasury Department declared that the profits of the oil syndicate during the current year were $20,000,000, and demanded payment to the State of advances made last year and in 1922, to put the industry on its feet. These figures, however, are contested by members of the oil syndicate, who estimated the profits to be less than $10,000,000, and proposed to the Treasury to allow them to credit their own personal account with debts to the oil syndicate by the Transport and War Department.

President Tsurupa of the State Planning Committee, appointed a board to investigate the matter and decide exactly the production cost. It appears beyond question that the Russian oil industry has made great strides toward recovery and that it will soon become an important factor in the world market, but at the same time it is said the profits of the oil syndicate are more on paper than real, owing to debts which some authorities put as high as $15,000,000.

Members of the oil syndicate further complain that they were forced in certain cases to sell oil to railroads at a price below production cost if they wanted to receive cash. On the other hand, the syndicate is said to have reduced cost sufficiently to show a profit on a million tons sold abroad in the current year, mostly to the British Shell Co., and to Italian and Turkish companies.

LOSE NAVAJO RIGHTS BY FALL'S REVERSAL

DENVER, Colo., July 5.—The General Land Office, through subsidiary officers in Utah, has notified Midwest Refining, Mutual Oil, Wyoming Associated and other companies operating in southeastern Utah of the cancellation of their exploratory permits on Navajo Indian reservation lands set aside by executive orders for the use of the Indians under the recent decision of the attorney general that such lands are not subject to the provisions of the general leasing act. Operations had been carried on under permits granted by Secretary Fall, who had ruled that executive order Indian lands belonged to the Government and were, therefore, subject to leasing. Doubt having arisen as to the correctness of the Fall decision, Secretary Work recently requested an opinion following which the Fall decision was reversed by Attorney General Stone.

The companies affected have expended close to $500,000 in exploratory work under the Fall permits. Oil was discovered in one well on Boundary Butte Dome. The companies expect to complete assessment work on permit lands to protect their legal position and then cease operations pending final outcome which may require judicial decision.

NEW OIL CAPITAL

The capital investment in new petroleum companies in the month of June totaled $20,574,000 for the 33 companies which were formed during the month. This compared with 42 companies chartered in May with an aggregate capitalization of $34,315,000 and 53 in April with a total capitalization of $94,124,000. The total capitalization for June of $20,574,000 was the lowest since 1915, when the average monthly capitalization was $6,711,100. The largest of the new companies chartered last month was the Consolidated Oil Co., incorporated in Delaware with a capitalization of $10,000,000.

A Mark of Distinctive Service for Over a Quarter of a Century

—oOo—

Mergers Consolidations Re-Organizations New-Financing

We specialize as Advisors and Counsellors in Mergers, Consolidations, Re-organizations and New Financing.

This service offered by the GREENHALGH ORGANIZATION, is the result of over twenty-five years' experience in this line of endeavor.

(NOTE)
Capital Stock Tax Returns Must Be Filed on or Before September 30, 1924, in Accordance with Recent Ruling.

CONSULT US REGARDING THE PREPARATION OF THIS RETURN

Check the service in which you are interested and write us.

☐Balance Sheet and Detailed Audits
☐Special Investigations
☐Refinery Cost Systems
☐Systems for Producing Companies
☐Advisors in Re-organizations, Mergers, Consolidations and New Financing
☐Preparation Requirements for Listing Securities for Trading
☐Preparation of Literature Concerning Public Offering of Securities
☐Federal and State Income Tax Service

J. H. Greenhalgh & Company
Public Accountants
4403 Sheridan Road, Chicago
16 King St., London

3 convenient shops for Tank Car Repairs!

no job too BIG — no job too SMALL

North American car repair service is always dependable, always efficient, always reasonable in cost. You can send your equipment to any one of the three shops listed below and know that it will be placed in first-class condition by workmen experienced in the work they do and in shops fitted with the highest type of modern equipment. . . . Try North American service once and you will understand why so many operators have been regular customers for years.

NORTH AMERICAN CAR CO.
327 S. La Salle St., Chicago
Southwestern District Office:
Petroleum Bldg., Tulsa
Shops at
CHICAGO, Tulsa, Coffeyville, Kan.
188

Smaller Operators Turning to Shallow Areas in Wyoming

CASPER, Wyo., July 5.—While the large oil companies in the Rocky Mountain region are searching assiduously for new fields in deep drilling areas, the little operators without funds to finance the costly deep holes are turning their attention to the shallow areas that have been passed over by the larger companies as being too small for the big fellows to play with.

There are several places in Wyoming and nearby States where shallow oil has been developed, but the distance to a market, lack of funds to develop, or other reasons, has kept the operation from assuming a productive state. The larger companies find they cannot operate these small productions with any profit. The overhead costs of a large organization together with a set procedure that works admirably in a large field, becomes clumsy and too expensive when applied to the working of a little lease and this is given as the main reason for the large oil firms passing up the small fields. The Producers & Refiners Corp. has sold its holdings in the Osage Field for this reason and the Ohio Oil Co. has turned its holdings in the Torchlight Field in the Big Horn Basin over to a local syndicate for the same reason.

The Moorcroft Field, Kakeman Field, Brenning Basin, Warm Springs, Plunkett and several others are examples of this class of operations where the production is too small to interest the larger concerns, yet which could be made to show a profit if operated by experienced operators in an efficient manner.

In the Brenning Basin especially, the laying of the Sinclair pipe line to Kansas has made an excellent opening for what production is there. The Sinclair line passes within a mile or two of the Brenning Basin wells and an old line that was laid to carry the Brenning Basin oil to the Fort Fetterman refinery, crosses the Sinclair line so it would be only a small matter to deliver the Brenning Basin crude to pump with an outlet in the Sinclair line and thus market the Brenning crude almost on the leases. At present the Burns Oil & Development Co. is the main operator in the Brenning Basin, but titles there to the holdings are either clouded or held by parties who wish to hold for the future so it would be a hard matter to obtain control of the area under one management which would be necessary to the efficient operation of the area as a whole.

OIL COMPANIES FIGHT SALT CREEK TOWNSITE

CASPER, Wyo., July 5.—A fight against the use of lands in the Salt Creek Field for promoting townsites and the sale of lots thereon was commenced in the Federal Court at Cheyenne by the Kinney Coastal Oil Co. and the Texas Production Co. The oil companies claim the surface of the land as well as the oil sands because the firms cannot run rod lines and erect tanks and other equipment unless they have surface rights on their leases, as the lands are under Government supervision except in a few instances where patents have been allowed and on the State sections, the Government was asked to step in and prevent the acquisition of the surface of leases from being preempted by the promoters of these townsites. The Government is therefore named as the plaintiff in the suits started.

The defendants are named as John Doe and Richard Roe together with the County Clerk at Casper and the Casper National Bank and the last two are named because the County Clerk recorded agreements for the purchase of lots in the proposed townsites and the Casper National Bank acted as escrow agent for same. The Wyoming Public Service Commission is also named because of a grant by that body for the laying of water lines designed to supply the townsites with water.

THE CORES WILL TELL

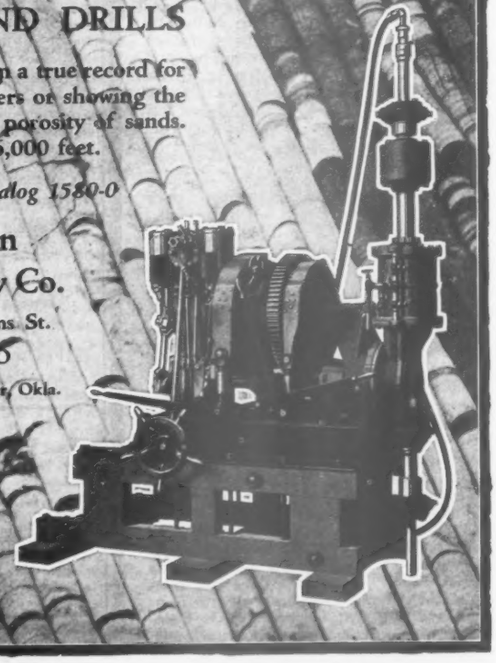
For finding structure or deep tests, employ the modern, accurate, least costly method—

SULLIVAN DIAMOND DRILLS

The cores form a true record for locating markers or showing the thickness and porosity of sands. Capacities to 6,000 feet.

Get Catalog 1580-O

Sullivan Machinery Co.
88 East Adams St.
CHICAGO
Dallas Garber, Okla.



BAKER CASING SHOE CO.
Box 264 F Huntington Park Sta. LOS ANGELES, CALIF., and Box 239 F COALINGA, CALIF.
MANUFACTURERS AND DEALERS
Oil Well Specialties for Advanced Methods Practical and Dependable

BAKER
Anchor Wall Packers
Baker Casing Shoes
Bridge Builders
Cement Retainers
Cement Plugs
Clean-Out Bailers
Dump Bailers
Die Nipples | Water
Die Collars | Tight
Gas Traps
Hinged Spiders
Heaving Plugs
Pitman Ends
Plain Casing Shoes
Regular Hook Wall Packers
Release Hook Wall Packers
Rotary Bits Baker Type
Rotary Hole Guides
Rotary Shoes
Rotary Tool Joints
Rotary Wall Hooks
Split Shoe Guides

All Supply Houses or Direct

Oil Securities

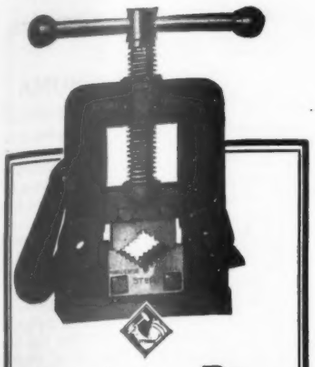
Inquiries Invited

Francis, Bro. & Co.
Established 1877
Members
New York Stock Exchange
New York Curb Market
Chicago Stock Exchange
St. Louis Stock Exchange
Kennedy Building, Tulsa, Oklahoma

GURLEY

The Oil Man's Standard in ENGINEERING INSTRUMENTS
— Since 1845 —
W. & L. E. GURLEY Troy, N.Y.

DEWITT T. RING
PETROLEUM GEOLOGIST
El Dorado, Ark.
905 Electric Bldg. Buffalo, N. Y.



Armstrong Bros.
PIPE VISES
IMPROVED DESIGN
GRIP TIGHT STAY RIGHT
Write for free catalog

ARMSTRONG BROS. TOOL CO.
330 No. Francisco Ave., Chicago, U.S.A.

Structure Drilling
Contractors With
The Diamond Core Drill
Wire or write us your wants.
Diamond Drilling & Exploration Co.
Pittsburgh, Pa.

F. W. FREEBORN
ENGINEERING
CORPORATION
ENGINEERS, APPRAISERS,
CONSTRUCTORS, MANAGERS
For
Oil and Industrial Properties. Valuations for Income Tax, Re-organization, Re-financing and Mergers
General Offices: Mayo Bldg.
TULSA, OKLAHOMA

Kesselman & Co.
Manufacturers of
Drilling and Fishing Tools
for Oil, Gas and Artesian Wells.
Parkersburg, W. Va., Butler, Pa.

Northern Oil Information Bureau
Shelby, Montana
Complete weekly drilling and operating report of Kevin-Sunburst field mailed to any address, $10 for four reports. Maps and logs for sale. Best of references.
We maintain a geological, land and field departments, all in expert hands

PRODUCTION AND CONSUMPTION IN JAPAN

(Continued from Page 28)

for lighting, cooking and heating is about 0.6 gallons per capital and has had a downward tendency during the last 10 years due to the extended use of electricity.

Quality is a secondary factor to the buyer of lubricating oils and greases in Japan, which accounts for the fact that importers supply about 30 per cent of the demands. Nearly all of the imported lubricants are from the United States.

There is one Japanese company, one British-Dutch company and three American companies that are distributors of petroleum products in a large way in Japan and dependencies. These companies are the Nippon Oil Co., the Rising Sun Petroleum Co., Ltd., (a subsidiary of the Royal-Dutch-Shell group), the Standard Oil Co. of New York, the Vacuum Oil Co. and The Texas Co. This group of companies supplies at least 90 per cent of the trade in petroleum products. Several other American oil companies sell their products in Japan and distribute these products through Japanese firms. The General Petroleum Corp. of California, the Associated Oil Co. of California, the Union Oil Co. of California and the Gilmore Petroleum Co. operate in this way. Foreign companies marketing petroleum in Japan have the same privileges legally as do the Japanese companies with the exception that the foreign companies cannot own land within the empire. A law was passed in 1910 providing that foreign companies might own land but for some reason this law has never been put into effect. At present, foreign companies that wish to own land in Japan incorporate a company under Japanese law, as such companies fulfill all legal requirements for the buying and holding of property.

Petroleum Area Unexploited

This compilation comprises numerous statistical tables and a vast amount of detail concerning prospective oil lands, oil consumption, etc. It shows that the petroleum areas of Japan aggregate approximately 10,000,000 acres, of which about only 80,000 acres have been prospected or developed. It is stated that over 2,900 fields or deposits of petroleum have been located in the empire, but not more than 25 have been actually exploited. It will be seen that, in spite of the diminishing production of Japan and the unfavorable result of exploitation of navy lands in Japan, there is a vast amount of acreage the petroleum possibilities of which are unknown. It is a question whether, within the depths of the Oriental mind, the reduced production is altogether accounted for by failure to strike oil or whether it is, in part, the result of a policy favoring the very gradual development of her own petroleum supplies and looking to foreign importations while oil is plentiful.

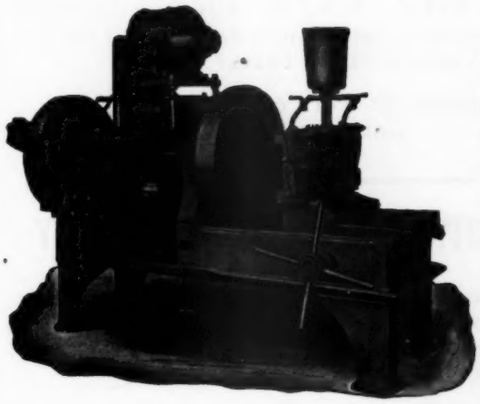
CORE TEST IN BRADFORD

BRADFORD, Pa., July 5.—*One* of the most important and progressive steps yet taken by oil producers in the Bradford Field toward establishing efficient methods of recovering the oil is the proposed plan to obtain core test drills of the Bradford sand. As the result of the activity of local producers the Punxsutawney Drilling Co. sent one of their rotary drills to Bradford and coring has been started on a location on the Bryner & Jackson property, about a quarter of a mile west of Custer on the Marshburg road.

OIL SITES RESERVED FOR NAVY

An auction sale of lots in Ford Townsite, near the town of Taft, in Kern County, California, will be held September 15. The mineral rights under the townsite are reserved to the Government. Four oil and gas drilling sites of approximately 2 acres each in 40-acre subdivisions, making in all 28 drilling sites, have been located within the area of the town and will not be put up for sale, being reserved for the Navy.

Pipe Cutting and Threading Machinery



The oil business is one of heavy duty therefore requires heavy duty machines. We have them.

Sizes up to and including 24″

Belt, Motor or Steam Engine Driven
Also
Equipped for Gasoline Engine Drive

THE COX & SONS COMPANY
BRIDGETON, NEW JERSEY
Business Established 1868

HOOVER
The World's Largest Ball Plant
STEEL
BRASS
BRONZE
MONEL METAL
BELL METAL
ALUMINUM
AND HOLLOW BALLS
HOOVER STEEL BALL CO.
ANN ARBOR, MICH.

sites with water.

DO YOU Export, Import, or Coastwise ship Petroleum Products? Refine or Top? Market Fuel Oil?

WOULD YOU Be interested in a site at tidewater for Refinery? Tank Farm Acreage? Low Realty Values? Low Taxes?

All available at Port of Texas City, on Galveston Bay.

Address

TEXAS CITY TERMINAL RAILWAY COMPANY

G. M. DENT
General Manager
TEXAS CITY, TEXAS

E. C. GUION
Vice-President in Charge of Traffic
404-405 American National Insurance Building
GALVESTON, TEXAS

TULSA BOILER & SHEET IRON WORKS

PIONEER TANK & BOILER COMPANY

A NEW NAME FOR AN OLD FRIEND

WHAT'S in a name, anyway? The refinery construction work we are doing under the name "Pioneer" is just the same high-grade as when it bore the name "Tulsa Boiler and Sheet Iron." For 18 years, as the "Tulsa Boiler and Sheet Iron Works" we have turned out tanks and refinery steel construction that made good friends for us among the wise buyers of the Mid-Continent. We pioneered in giving these people "close to home" service on the best kind of work. Now, under our new name, The Pioneer Tank and Boiler Company, we're all set with the men, machinery and money to keep on growing under the Pioneer banner like we did when Tulsa Boiler and Sheet Iron was on our letterhead. There is no change in our organization. Get Pioneer quotations on tank and refinery construction work.

PIONEER TANK & BOILER CO.
(Formerly Tulsa Boiler & Sheet Iron Works)
Box 1926, TULSA, OKLA.

Fill In The Coupon!

Then you will be SURE of getting the Journal every week and the 1924 Semi-Annual Review of the Petroleum Industry—it will be published this month.

Mail the coupon now.

The Oil and Gas Journal

Tulsa, Okla.

You are hereby directed to mail The Oil and Gas Journal to me for_____year. Enclosed find remittance $_____

Classify my interests as checked by me.

____Producing ____Refining
____Equipment ____Marketing

Name_____
Address_____
City_____

$6 a Year
$3 6 Months

GULF COAST OUTPUT HIGHER DURING JUNE

HOUSTON, Tex., July 7.—The estimated gross production for the Gulf Coast pools and the Southwest fields combined during the month of June is estimated at 3,845,220 bbls., compared with an estimate of 3,554,764 bbls. during May, or an increase of 290,456 bbls. The southwest districts increased 326,443 bbls. gross over May, the Luling Field alone showing an increase of 332,500 bbls. for the month. The other fields declined, The gross output in the Gulf Coast division declined 35,987 bbls. from the May figures.

The gross from the Coastal heavy gravity region during June is placed at 2,419,800 bbls. against 2,455,787 bbls. in May. The estimated daily average for the month was 80,660 bbls. from 2,549 wells, or 42 more producers than at the close of May. All the pools show a decline except Edgerly (La.), Humble, Hull and miscellaneous. A well in the semi-pool at Big Creek, Fort Bend County, that started off at 1,000 bbls. initial is responsible for the increase under the head of miscellaneous. Worked over wells in the Edgerly Pool and a big well late last month, together with worked over wells in the Humble Pool are responsible for an increase of 48,798 bbls. there compared with May. The same reasons apply to the Hull Pool.

In the Southwest fields, Luling is the only place showing an increase over May, which is accounted for by reason of more outside buyers of crude entering that district and therefore shipments have increased. Although the United North & South Oil Co., which has 65 per cent of the production there, has greatly curtailed its drilling operations, shut in wells have been opened and others on top of the lime were drilled in.

Prices remained unchanged during the month.

The following table gives the number of wells, estimated daily average, gross output and changes from last month:

District—	No. wells	Daily Av.	Gross for month.
Batson	351	1,515	45,450
Blue Ridge	17	1,301	39,030
Barber Hill	16	162	4,860
Dayton	10	86	2,580
Damon Mound	31	1,518	45,540
Edgerly (La.)	16	564	16,920
Goose Creek	243	11,050	331,500
Humble	304	7,325	219,750
Hull	224	21,142	634,260
Jennings (La.)	43	547	16,410
Markham	29	436	13,080
Orange	240	10,144	304,320
Pierce Junction	8	422	12,660
Spindletop	109	932	27,960
Saratoga	265	1,477	44,310
Sour Lake	403	4,495	134,850
Vinton (La.)	95	5,306	159,180
Welsh-La Bute	6	83	2,460
West Columbia	109	11,169	335,070
*Miscellaneous	25	987	29,610
Total for June	2,549	80,660	2,419,800
Total for May	2,507	79,247	2,455,787
Difference	42	1,413	35,987
Southwest Fields			
Laredo	285	4,180	125,400
Somerset	229	2,512	75,360
Calliham	27	796	23,880
Rockdale-Minerva	183	526	15,780
Luling	154	39,500	1,185,000
Total for June	878	47,514	1,425,420
Total for May	858	35,467	1,098,977
Difference	20	12,047	326,443
Grand totals—			
Gulf Coast	2,549	80,660	2,419,800
Southwest fields	878	47,514	1,425,420
Total June	3,427	128,174	3,845,220
Total May	3,365	114,714	3,554,764
Difference	62	13,460	290,456
Total for April			3,362,130
Total for March			2,967,630
Total for February			2,744,272
Total for January			2,773,880

*Includes Big Creek, Nacogdoches, Big Hill, Stratton Ridge, Hockley, New Iberia (La.), and other spots.

OIL SUITS OFF UNTIL FALL

WASHINGTON, D. C., July 7.—The naval oil cases are at a standstill until October. The trial of A. B. Fall, H. F. Sinclair, E. L. Doheny and his son, indicted for conspiracy, will not begin here before then. Suits instituted in Wyoming and California for cancellation of the leases likewise will not be heard until October. Filing of demurrers and motions to dismiss are expected and these may be ruled on during the summer by the one justice sitting in court here.

LAST MINUTE *from* OKLAHOMA

An interesting Kay County wildcat in the Comar Oil Co.'s No. 1 Duncan, C NE NE SW, Section 21-29-1e, which was lowering the 10-inch pipe and making 65 bbls. of oil from sand topped at 1,930 feet and penetrated 4 feet.

The Otstot Oil Co. and others found 48,000,000 feet of gas in their No. 1 Slocum, SE cor. NW, Section 16-27-1w, Kay County. The gas sand was encountered at 3,430-48 feet. This well previously produced 105 bbls. in 24 hours from an upper sand at 3,032-34 feet but was drilled on down because of trouble with water.

The Comar Oil Co.'s No. 4-W Carmichael, NE cor. Section 3-24-1w, Noble County, the third well in the deep Tonkawa sand, increased to 120 bbls. an hour, having gauged 2,578 bbls. in the 24 hours ended Tuesday morning.

In Okfuskee County, the Kingwood Oil Co. was underreaming the pipe 60 feet off bottom in its No. 1 Hawkins, SE cor. NE, Section 12-7-9, which had a good showing. Total depth was 3,458 feet.

LAST MINUTE KANSAS

In Greenwood County, Hazlett and others had 600 feet of oil in their No. 1 Bitler, a wildcat in the SE cor. Section 12-22-10, from sand topped at 2,138 feet and penetrated 12 feet. This looks capable of making a good producer and is interesting since it is a mile north of some small wells.

MAY PIPE LINE RUNS IN TEXAS 11,621,919

AUSTIN, Tex., July 7.—Reports of pipe line runs in Texas for May compiled by the oil and gas division of the Railroad Commission shows total runs were 11,621,919 bbls., a decrease of 637,332, compared with the previous month. The largest amount of oil was gathered from Navarro County, 2,726,476 bbls., of which 1,430,755 were from Chambers Creek and 910,822 from the Powell Field.

Wichita County was second with 1,431,975 bbls., of which 782,000 were from Holliday and 456,273 from Burkburnett; Luling district, third, with 1,002,090 bbls. Electra fourth, with 998,298 bbls., and Limestone County fifth with 871,718. Gatherings from other counties were:

Archer, 14,933; Atascosa, 5,170; Bexar, 339,582; Brazoria, 380,436; Brown, 22,905; Caldwell, 53,719; Chambers, 2,427; Clay, 831, Coleman, 7,361; Comanche, 16,129; Eastland, 253,763; Falls, 27,354; Fort Bend, 39,487; Freestone, 633,420; Harris, 480,331; Jack, 5,630; Jefferson, 26,503; Liberty, 598,489; Live Oak, 16,888; Matagorda, 11,754; Marion, 2,856; Mitchell, 25,032; Orange, 263,122; Palo Pinto, 64,022; Shackelford, 119,557; Stephens, 578,032; Young, 163,723; Williamson, 2,090; De Leon, 265,830; Ranger, 134,444.

CZECH MONOPOLY OFF

Czecho-Slovakia is abandoning a Government monopoly of oil production and prospecting and throwing open its lands for the commercial oil prospector. Not that there is much production to have a monopoly over; in fact, it may be said that the existence of a monopoly was fatal to true prospecting. A law dated March 22, 1920, set up the Government monopoly. A resolution of the Senate recently raised the question again by expressing a desire that this law should be abrogated and bituminous products be placed under the general mining laws. By this means oil and oil products would be available for discovery or winning by private enterprise. The Government has now drafted a bill to do away with the law of 1920. Its preamble states that the hopes of rich oil discoveries in Czecho Slovakia have not hitherto been fulfilled and that such discoveries cannot be reckoned on with any surety.

NATURAL GASOLINES CONTINUE TO CLIMB

(Continued from Page 22)

in some instances have made it possible to burn a lower gravity product and this accounts for the demand. Some contracts have been placed with a base price in line with the present spot market with advances or declines depending upon either the kerosene tank wagon or crude market changes.

Natural Gasolines and Blends

The advance in the natural gasolines has been previously explained. Grade A advanced to a low of 8 cents the first of the week and very little Grade C was available under 7¼ cents. Refiners in the Mid-Continent area are buying more especially the north Louisiana group. Contract shipments to eastern buyers has also improved according to the large manufacturers. The blend market is fairly active and prices are firm.

Fuel and Gas Oils

There was enough fuel oil buying so that prices are generally firm. Gravities did not play as important a part as usual and several buyers were paying the same price for all grades under 26 gravity. The intrastate buyers were more active than usual, including at least one railroad which is buying on the spot market in addition to its contract purchases. Gas oil was not so active, although prices are generally firm at 2¾ to 2⅞ cents. Purchases by large buyers which were responsible for the market advance two weeks ago are conspicuous by their absence. It is generally believed that more buying will be needed to maintain present prices.

Neutrals and Wax

The neutral market is still unsettled. So far as known, the buying is in small shipments and not enough to prevent an accumulation of several grades. Largely the same situation applies to the cylinder stocks.

About all the wax available for July delivery has been sold. The few manufacturers in Group 3 believe that August prices will be higher and are refusing the offers for this business.

THREE YEARS' EFFORTS TO FIND OIL UNSUCCESSFUL

(Continued from Page 23)

high nipa grass. Bunkhouses were built —California style and design—and after weeks of labor drilling was begun, and a well called Amuguis No. 1 was "spudded in" on March 20, 1921.

Worked Under Difficulties

"For more than three years the work proceeded, steadily but with climatic interruptions. The rains brought floods; the typhoons were destructive. The first hole went 1,200 feet, and was abandoned on account of mechanical trouble. No oil. The second hole was drilled to 3,750 feet. No. oil. The third, the final great effort, went down to a depth of 5,120 feet, almost a mile. No oil—and the end.

"To the men of Bondoc goes great credit. It has been for these Californians a long, arduous and hazardous job. While everything possible for health, recreation and comfort was provided in this faroff place, it was still a wearisome task. The nearest barrio was a dozen miles away, and there only a handful of natives. White men seldom came that way. Frequently the roads were utterly impassable, even between the two Standard Oil camps which had been built 9 miles apart. Once isolation was complete for a month—the radio went out of commission, the intercamp telephone wire was blown down, and the road a deep mire. Disease, particularly malaria and dysentery, was an always present menace, and some became ill, but as a whole, health was good, due to proper sanitation. Of the recreation there was little or none—some hunting when rains allowed. During the wet season, it was for the most part, imprisonment in camp. Once two United States Army airplanes crashed nearby—an exciting event.

"The effort in the Philippines has been watched with great interest by the United States Government, numerous branches of which realized the vast importance of an American oil supply on the other side of the Pacific Ocean.

"The failure to find oil at Bondoc does not prove that there is no oil in 'the islands.' It means that there is none in the area prospected. There is oil to the north, in Japan, and to the south, in Borneo, and it may yet be found in the Philippine group, where there has been only one real drilling campaign—the one just finished."

NORTHWESTERN PENN. PRODUCERS MEETING

BRADFORD, Pa., July 7.—Pres. W. J. Healey presided at the meeting of the Northwestern Pennsylvania Oil Producers' Association, at which Edward Booth made a report of the progress made in the advertising campaign of the Pennsylvania Grade Crude Oil Association.

Col. A. D. Burns, chairman of the local publicity committee, reported on the progress of the work in this section and thanked the Bradford banks and others who have donated advertising space to the association. It was reported several concerns have greatly increased their sales since the advertising began.

W. C. Pifer, a local oil man, led a discussion of the test core drilling being done at Custer City.

It was suggested by Forest Dorn that a code of ethics be adopted by the oil men regulating especially the manner in which flooding is carried out so as not to encroach on the rights of operators in adjoining leases. President Healey was authorized to appoint a committee to frame a suitable code to be submitted for approval at the next meeting. Beginning next month the association will hold monthly meetings.

"DRILL A FOOT" PLAN DEFENDANT ON TRIAL

HOUSTON, Tex., July 7.—The Government case against Phillip Hopkins, divorced husband of the famous Peggy Joyce, went to trial in the Federal Court in Houston today. Hopkins was indicted in connection with the operations of a number of oil companies in Texas and Arkansas. Hopkins is alleged to have been connected with 15 promotion companies, commencing operations in April 1921 and continuing until February 1924, when he was arrested at Atlanta, Ga.

Among other schemes, which the Government charges were fraudulently launched by Hopkins was the "drill a foot" plan, by which Hopkins sold "feet" in a proposed 3,000-foot well at $10 per foot. Each "foot" entitled the purchaser to a 1-3000 division of a 1,700-acre tract which he claimed to own, but which the Government asserts he had no ownership interest in.

Post offices have been investigating fraudulent use of the mails in Texas for more than one year and several promoters have been found guilty in the Federal courts and sentenced to the Atlanta and Leavenworth penitentiaries.

DEATH OF F. S. HASTINGS

Frank Seymour, banker and executor of the Grover Cleveland estate, died recently at Port Washington, L. I., after a year's illness. Mr. Hastings was interested in many oil refining companies, and at the time of his death was vice president of the Aetna Refining Co., vice president of the Phoenix Refining Co., and treasurer of the Regan Gas & Oil Co. On many occasions Mr. Hastings was referred to as a confidential adviser of J. P. Morgan.

PRAIRIE'S SHIPMENTS IN JUNE

The Prairie Pipe Line Co.'s shipments and deliveries of crude oil from Texas, Oklahoma and Kansas fields in June amounted to 3,547,891.02 bbls., a daily average of 118,263 bbls. In May the company's shipments were 3,658,266 bbls. or 118,009 bbls. per day, indicating a gain in June of 254 bbls. a day.

Nye
The Die Man
Pipe Tool Maker to the American Plumber and Steamfitter

THE BUSINESS TWICE?
OR
TWICE THE BUSINESS?

The Man who picks things up and lays them down, to do some other time, loses money.

The Man who picks things up and finishes them up before he lays them down makes money.

The tool that works hard and cuts ragged, that wastes your time and spoils your temper, loses you money.

The tool that does the job at once, without delay, without bucking or breaking, makes you money.

Nye Dies and Tools

are for plumbers who want to do **twice the business**, not the business twice.

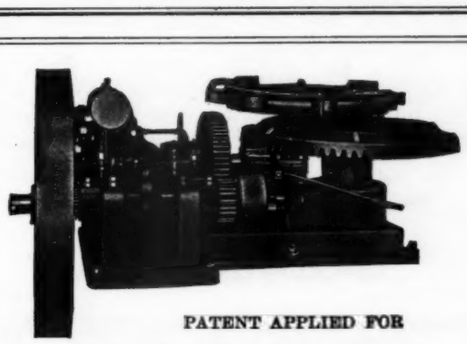
Cutting faster and smoother than all others, they make a shop run the same way.

Go into any shop that is doing twice the business it was a few years ago and you will find they use NYE DIES and TOOLS.

They do the business at once.

THERE'S the NYE VISE STAND and PIPE BENDER, a sturdy, dependable tool that will help you do twice the business, twice as fast. Send for one on 10 days free trial.

HARRY G. NYE
The Nye Tool & Machine Works
108-128 No. Jefferson St., Chicago, Ill.



PATENT APPLIED FOR

"THE SPENCE"

A combined gas engine and single eccentric pumping power, with a 10½-H. P. gas engine, positive governor, gravity feed lubrication and Wico ignition for gas or gasoline equipment. This power has been pronounced by some of our largest producers as one of the best pumping units on the market for wells in territory of medium depth.

Manufactured and Sold by

H. M. SPENCE, Parkersburg, W. Va.

Biggest In America

The Oil and Gas Journal Classified Wants Section is the greatest petroleum publication Classified Section in America.

It was elevated to its position of esteem by the men in the industry because of its absolute merit in helping them.

The Classified Wants Section is read in all the oil fields, refineries, pipe line stations, gasoline plants, supply houses and business offices.

This gives you a splendid opportunity to place your wants before the entire industry at a most reasonable cost.

Be sure to read the Classified Section every week. IT WILL HELP YOU.

THE OIL AND GAS JOURNAL

Stanley Belting

Look At This Weave

It has taken many years close study to develop the weave of Stanley Solid Woven Cotton Belting; a belt so pliable you can wrap it around your wrist and yet so tight and compact a weave that it will not soak oil. Only the Stanley woven in Scotland has the hinge weave. "The Oil Man's Belt."

Stanley Belting Corporation
15 No. Jefferson St., Chicago, Ill.
320 Broadway, Room 1317, New York, N. Y.
T. R. Bartlett, P. O. Box 909, Tulsa. Phone Cedar 4588-R.
W. K. Tucker, 5511 Richard Avenue, Dallas, Texas. Telephone H6525.
Pacific Coast Rubber Co., 316 Mission St., San Francisco, Cal.
Mountain States Rubber Co., 1235 Broadway, Denver, Colo.
On permanent display at Tulsa Industrial Exhibition

One Price—$6.00 Covers Everything

Renew your subscription this month. Then you will be absolutely sure of getting all special issues, Convention Numbers, International Petroleum Congress numbers, the 1924 Annual Review, and the July Semi-Annual Review.

One idea in any of the 52 issues may be a means of saving hundreds of dollars for your organization and, consequently, be an aid to your own advancement.

Mail Your Renewal Order This Week

The Oil and Gas Journal

"America's Greatest Petroleum Publication"

Gasoline Plants **Topping Plants**

Gas Compressing Stations **Refineries**

Designed and Installed Complete

FEDERAL ENGINEERING COMPANY
PITTSBURGH, PA.

Trustworthy **POWER** **Be Sure Your Machines**

Are Equipped With

CLIMAX

"The Trustworthy Engine"

CLIMAX ENGINEERING CO., 32 W. 18th Ave., Clinton, Iowa

ANSWER AGITATION AGAINST CURB PUMP

(Continued from Page 32)

cerned. There is no more tie-up, nor restriction of traffic, than is occasioned by the permissible parking of cars along our city streets. Remove the curb pumps and you have taken away the most convenient means of handling gasoline sales.

"Along with them goes an inexpensive and easy method of distribution. A complete pump and storage tank may be installed at the curb for a relatively small amount compared with the cost of a filling station. The comparison cannot be pushed too far, for of course the attractive drive-in station offers a great deal more in the way of service, but for the hurried customer, wanting only gasoline and able to find room on the street to stop by a curb pump, the latter will answer the same purpose as one located back of the building line.

"As for safety, a whole chapter might be written. Certainly a decade of experience and use has demonstrated the value of the curb pump to the safe handling of gasoline. Hundreds of thousands of gallons of this motor fuel are handled daily through these pumps without a vestige of hazard. And any adverse reasoning, by which other more dangerous means of handling gasoline might be substituted is hard to fathom. Yet, almost without exception, in places where the removal of curb pumps has been agitated, other exceedingly dangerout methods of dispensing gasoline have been contemplated.

"If, in the future, life and property are to be safeguarded with the same care as in the past; if service to the motoring public is to continue on an efficient basis; if economical distribution is to be maintained, then the right of the curb pump to function as an important link in the chain of marketing service should not be abrogated, nor even questioned."

TOO MUCH LEGISLATING FROM THE WRONG END

(Continued from Page 129)

lies in starting "regulatory" legislation at the filling station—the security of the petroleum industry lies in starting legislation with the foundations of the industry.

The petroleum industry has billions of dollars of assets and its products, in one form or another, are used by practically every man, woman and child in the civilized world. Our National and State Governments and our people should maintain toward it an attitude of sympathetic understanding as well as a constructive relationship that would find their full fruition in the industry's receiving a just profit and its millions of customers an equitable service.

This understanding and this relationship, this profit and this service, could result from the labors of a National Petroleum Commission.

INCREASE PROVEN AREA

SAN FRANCISCO, Cal., July 5.—The proved area of oil lands in California increased from 112,761 acres on March 1, 1923 to 116,868 on March 1, 1924, or by 4,107 acres. The increase was distributed as follows: Kern County, 3,395 acres; Los Angeles, 1,089; Ventura, 52. The following decreases, due to abandonment of exhausted areas, are shown: Orange County, 355; Fresno, 54.

ACCIDENT SEVERITY RATE

The average accident severity rate for 20 petroleum company members of the National Safety Council was higher in 1923 than in 1922, according to accident reports recently made to the council. The rate for 1923 was 2.576 as against 1.862 for 1922. The latter figure is the record low mark for the petroleum section of the council. Most of the members reporting have more than 500 employes. Two of them, each with slightly over 2,000 employes had severity rates of less than one. The frequency rate for 1923 in this group was 34.14 while for 1922 it was 35.94.

DEAN E. WINCHESTER
GEOLOGIST
Petroleum and Oil Shale Examinations
607 E. & C. Bldg., DENVER, COLO.

L. G. Huntley Stirling Huntley
HUNTLEY & HUNTLEY
PETROLEUM GEOLOGISTS AND ENGINEERS
Frick Building, PITTSBURGH, PA.

HARRY F. WRIGHT
GEOLOGIST
Geological Examinations
Valuations for Tax and Financing
206 So. Cheyenne TULSA

JOHN B. KERR
PETROLEUM GEOLOGIST
Phone Garfield 4734
601 Balboa Bldg.
San Francisco, Calif.

THE JAS. I. TUCKER CO.
CONSULTING AND APPRAISAL ENGINEERS
Valuation of Oil and Gas Properties for Income Tax and Commercial Purposes
Tradesmens Bank Building
OKLAHOMA CITY, OKLA.

H. H. HOOD
PETROLEUM ENGINEER AND GEOLOGIST
Explorations, Surveys, Appraisers, Audits, Consultations, Management
1310 Chemical Bldg., St. Louis, Mo.
1314 Fisher Bldg., Chicago

F. B. Porter, B.S., Ch. E., President
R. H. Fash, B.S., Vice President
THE FORT WORTH LABORATORIES
Field gas testing. Analyses of oil field brines, gas, minerals and oil
828½ Monroe St., Fort Worth, Texas

I SPECIALIZE IN OIL WELL
PATENTS
Geo. H. Myers. 503 Petroleum Bldg., Tulsa, is my oil field technical associate. Prompt service. Reasonable fees.
I. G. Quesada, Reg. Patent Atty., Barrister Bldg., Washington

W. L. GOMORY
CHEMICAL ENGINEER
Consulting Petroleum Technologist
INVENTOR GOMORY CRACKING PROCESS
Licenses Solicited
Refinery Design
Peoples Gas Building Chicago

WESTERMAN BROS.
Manufacturers of
Oil and Gas Well Supplies
Write for New Catalogue
BREMEN, OHIO

WRITE FOR OUR FREE BOOK ON
PATENTS
MUNN & CO.
631 Woolworth Building NEW YORK
Scientific American Building WASHINGTON, D. C.
Tower Building CHICAGO, ILL.
Hobart Building SAN FRANCISCO, CAL.

W. G. MATTESON
CONSULTING GEOLOGIST
Specialist examinations and appraisals Mid-Continent and Gulf Coast Oil Properties
814 Texas State Bank Bldg. Fort Worth, Texas
Box 471, G. P. O., New York City

F. JULIUS FOHS
OIL GEOLOGIST
1320 Kirby Bldg., Dallas, Tex.
First Natl. Bank Bldg., Tulsa, Okla.
and 60 Broadway, New York
Cables: Fohsoil, Bentley & McNeil Codes
No professional work undertaken

William H. Foster W. A. Reiter
FOSTER & REITER
CONSULTING GEOLOGISTS
19th Floor, Magnolia Bldg., Dallas
Atlas Life Bldg., Tulsa

WALTER STALDER
OIL GEOLOGIST
Crocker Bldg.
SAN FRANCISCO, CALIF.

FRANK C. GREENE
CONSULTING GEOLOGIST
513 Exchange Natl. Bank Bldg.
Tulsa, Okla.
Office Phone Osage 7682
Residence Phone Osage 2576

V. H. McNUTT
CONSULTING GEOLOGIST AND APPRAISER
Specializing in Northern Oklahoma and Southern Kansas Fields
TULSA, OKLA.
Rooms 404-405 Commercial Bldg.

C. W. WASHBURNE
GEOLOGIST
2 Rector Street New York

E. J. LONGYEAR CO.
MINING ENGINEERS AND GEOLOGISTS
Diamond Core Drill Manufacturers
Diamond Drilling Contractors
MINNEAPOLIS, MINN.

EDWIN B. HOPKINS
CONSULTING GEOLOGIST
25 Broadway
NEW YORK

J. C. STULL
GEOLOGIST
Explorations, surveys, appraisals
Diamond core drilling, for structure or wildcatting
130 Chapel St., Hot Springs, Ark.
Farmers State Bank, Granite, Okla.
Brady Hotel, Tulsa, Okla.

ROBERT W. CLARK
CONSULTING GEOLOGIST AND APPRAISER
Depletions and Reserves for Income Tax
217 Commerce Bldg.
OKMULGEE, OKLA.

BRITISH SOCIETIES TO COOPERATE ON OIL

Cooperation between the technologists interested in petroleum has been advanced by a recent decision in London, about which the London Oil News says: "For some years past a movement has been on foot among the best-informed oil scientists for a union between the Institution of Petroleum Technologists, the Institution of Mining Engineers, and the Institution of Mining and Metallurgy. The two last named are more or less combined. We believe the Institution of Petroleum Technologists had a good opportunity to form a third in the combination about two years ago but hesitated to at that time. Union in the co-operative sense is and will be an advantage. In connection with the Empire Mining and Metallurgical Congress a dinner was held at the Guildhall at which Lord Long presided, and the three institutions, together with the Mining Association, the Iron and Steel Institute, the Institute of Metals, and the National Federation of Iron and Steel Manufacturers, sent their presidents to support the chairman. A council has been formed to serve for intercommunication between the cooperating institutions and to promote the interests of the professions and industries represented. An endeavor will be made to create and maintain throughout the Empire a high standard of professional status; and, to carry out these and other objects, the Empire Council of Mining and Metallurgical Institutions has been formally constituted. We congratulate the body with which we are most concerned, namely, the Petroleum Technologists, on joining in the constitution of this Empire Council."

DRILL IN ALBANIA THROUGH OIL SANDS

The goilogical engineer of the Italian State Railways, Dr. Leo Maddalena, gives the following interesting data on the well put down at Draschovica, near Valona: The well reached a depth of 200 metres, traversing marl, chalk and sandy clays, and went through oil sands at the following depths: 1.60 metres, 91 metres, 101.60 metres, 119 metres, 121.50 metres, 168 metres and 179 metres. The oil was richest in quantity at the 101 metres mark, which yielded up to 3,500 litres in the 24 hours. Altogether 80 tons of oil came from this horizon. The characteristics of the oil are rather large viscosity, blackish color, characteristic bituminous odor, and a heat value of 9,133 calories (⅝) per kilogram. Fractionally distilled, it gave the following results: motor fuel (up to 150°), 2.10 per cent; kerosene (150-310°), 17.20 per cent; residues (to over 310°), 67.93 per cent; coke, 11 per cent; sulphur, 1.77 per cent. The flash point is given as 125° It is thus clear, says the London Oil News, that the Draschovica discovery is of a highly oxidized petroleum, which has almost lost its volatile constituents.

MEXICAN TAX ON OIL STEADILY INCREASING

Since the beginning of the year, oil taxes imposed by the Mexican Government on oil production have shown a steady increase in conformity with the rise in the price of fuel oil in New York harbor, on which the taxes are based. Production tax on light crude oil for June is 8 cents a barrel higher than in January, amounting to about 25 cents a barrel. A similar increase has taken place in the levy on the production of fuel oil, which is 23 cents a barrel for June, or about 8 cents higher than at the beginning of the year. On heavy crude oil the increase is 3 cents a barrel, the June production tax being 13 cents. Within a period of six months the basic price of fuel oil has risen from 1,41½ a barrel to 1.83.

Besides the production tax, there is also a specific export duty, which is the same now as when it was fixed August 8, 1922. Export tax on light crude oil is, roughly, 8 cents a barrel, on heavy crude 5 cents and on fuel oil 6 cents a barrel.

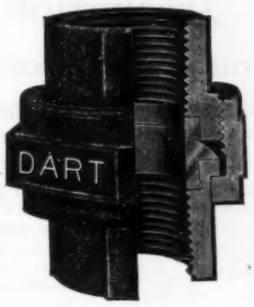
ODEE PIPE
for
GAS LINES

ODEE plain end steel pipe for gas lines will unquestionably serve your purpose as well as regular line pipe, and you will find a saving in the original cost about half. Due to the fact it is furnished in double lengths of approximately 40 feet with smooth ends ready for welding in the field, your cost for installation is less than the cost of screwing together a threaded line. The practical gas man knows today the welded joint means permanency, with no leaks.

ODEE steel pipe is sold under the same rigid inspection and examination as new line pipe out of the mill.

JOS. GREENSPON'S SONS IRON & STEEL CO.
St. Louis, Mo.

DART UNIONS and FLANGES
Two Bronze Seats



May we send you sample to try on your most troublesome line? It is absolutely free. Write today for catalogue "O."

E. M. Dart Mfg. Co., Providence, R. I.
The Fairbanks Co.,—Distributors

ALDRICH
There's an Aldrich Pump for Every Service
Write for Catalogue
THE ALDRICH PUMP CO.
Front Street ALLENTOWN, PA.
Sales Agencies in Principal Cities Office and Warehouse in Tulsa
PUMPS

PRATT & CADY
300 Pound Test
Gate Valves
READING STEEL CASTING CO., Inc.
Pratt & Cady Division
BRIDGEPORT, CONNECTICUT
929 Connecticut Ave
Stocked by
Norvell-Wilder Hardware Co., Beaumont, Houston, Mildred and Shreveport. Grinnell Co., of the Pacific, Los Angeles, California

STEEL

for Immediate Shipment from Stock

Bars, Plates, Rivets, Tool Steel, Shapes, Sheets, Bolts, Welding Rods, Structurals, Tubes, Wire, Concrete Reinforcing, Rails, Pipe, Turnbuckles, Small Tools, etc.

Write for Ryerson Journal and Stock List

JOSEPH T. RYERSON & SON INC.

CHICAGO ST. LOUIS CINCINNATI

TULSA OFFICE—418 ATLAS LIFE BLDG.
HOUSTON OFFICE—220 MAIN ST.

DETROIT BUFFALO NEW YORK

ABSORPTION GASOLINE PLANTS

Made by

THE NEWTON PROCESS MANUFACTURING COMPANY

Guarantee

LOWEST INVESTMENT

SHORTEST TIME TO ERECT AND PLACE IN OPERATION

CONSTANT AND DEPENDABLE OPERATION

QUICKLY AND EASILY MOVED

COST OF OPERATION VERY LOW: Will make either Grade A or commercial grades of gasoline at a cost of from one to two cents per gallon.

HIGHEST RECOVERY GUARANTEED

Plants built in Units of 50,000 cubic feet, to 10,000,000 cubic feet of gas daily.

For Further Information Call or Write

THE NEWTON PROCESS MFG. COMPANY

Fullerton, Calif.

Tom McGuire
1002 First Nat. Bnk. Bldg.
DENVER, COLO.

Hurley Company
1041 Kennedy Building
TULSA, OKLA.

Office 123 E. Fifth St.

Office Phone Osage 2413
Res. Phone Osage 2652

Write us for estimates

BRENNAN & ROONEY

CONTRACTORS & ENGINEERS

General Construction, Plans & Estimates

We are specializing on Engine Foundations, Concrete Floors, etc., for the International Petroleum Exposition

TULSA, OKLA.

EXPERIENCE JUDGMENT INTEGRITY SERVICE

GENERAL PETROLEUM ENGINEERS, Inc.

Practical Oil Field Service

F. C. HARRINGTON, General Manager.

ATLAS LIFE BLDG., TULSA, OKLA

Domestic and Foreign Active, Advisory and Consulting

Explorations, Appraisals, Valuations, Inventories and Reports.
Geological Surveys and Reports Made, Interpreted and Applied Practically.
Economic and Efficiency Surveys and Reports on Producing Properties.
Protective and Advisory Reports on Petroleum Enterprises and Securities.
Leases Secured, Extended, Renewed and Surrendered—Title Complications Adjusted
Rigs Furnished and Built—Standard and Rotary.
Wells Located, Drilled, Cleaned, Operated and Salvaged.
Gas Tested, Modern and Improved Plant Installation—Gasoline, Vacuum and Air.

Subsidiary Companies: *Petroleum Drilling Company*, *Petroleum Rig Building Company*

Telephones— Local: Osage 5042; L. D.: 191

American S & B Instruments

reduce manufacturing costs, eliminate spoilage and increase efficiency. They are the result of over 70 years' experience in solving problems of temperature, pressure, speed, etc.

Write for Text Book N-5

American Schaeffer & Budenberg Corpn.

Succeeding
The Schaeffer & Budenberg Mfg. Co.
American Steam Gauge & Valve Mfg. Co.
Hohmann-Nelson Company
BROOKLYN, N. Y.

Boston Cleveland Tulsa
Buffalo Detroit Philadelphia
Chicago Los Angeles Pittsburgh

British Chairman, Visitor to Rumania, Reports Operations

Sir Edward Manville, chairman of the Phoenix Oil & Transport Co., London, returning from a visit to the company's properties in the Rumanian fields, said:

"It must not be forgotten that the intensified drilling program which is at present in progress, and which is at least on as extensive a scale as that of any other oil company in Rumania, only became possible last autumn, when the two large companies we absorbed that year, viz., the Rumanian Consolidated Oilfields, Ltd., and the Orion Co., were reorganized and their management consolidated with our own. The development of the Stavropoleos Field at Moreni has been justified, and the difficulties of the sanding up of the wells peculiar to this area have been overcome.

"The experience gained at Stavropoleos will probably serve us in good stead on the new field of Gura Ocnitei (which is, for all practical purposes, a continuation of the former field), and where, during the time of my visit our first well drilled into the oil sands there, gave indications of conditions equal to those we experienced when we drilled in No. 5 well at Stavropoleos, which gave, during the first 18 months of its life, some 40,000 tons of oil. This well at Gura Ocnitei is now being cleaned after the requisite dams have been constructed to catch the oil which may be erupted in large quantities, and we are justified in hoping for results considerably beyond the average there. Importance may be attached to this well coming in as a probable large producer, since the considerable area of ground of which we have a lease in this district, affords opportunities for the drilling of a large number of wells, and it is the intention to concentrate on an extensive drilling program on this field.

"An excellent well at Runcu, No. 3, began its eruptions on May 5 and sanded up some days later; resumed production on May 22, and continues its eruptions with a yield of about 250 tons per day. Wells 602 and 621, in the same field, have also reached the oil sand under very favorable conditions. The results given by this new well lead to the conclusion that the wells in this district will prove highly remunerative, and there are a further 13 in drilling here, 10 of which should be brought in this year, some of them very speedily.

"Operations on a large scale are being carried out at Tintea, which is the principal producing field of the Orion Co. Well No. 71 came into production last January, giving large quantities of oil before plugging. It has been since ascertained that the cause of the stoppage of this well was the bending of the casing in the oil sand, due to the force exerted by the oil and sand. It has proved a lengthy operation to drill through the casing at the bend and insert a new short length there, which operation, however, is progressing, and is sure to be satisfactorily achieved when this well will again produce probably at much the same rate as on its first exhibition. Not only was its large production very satisfactory, but it proved the existence of a new source of oil in this field which promises to give larger outputs from the various wells than hitherto obtained from those in this neighborhood. Further, it has proved and opened up a large extension of the Tintea Field on which at present a considerable number are actually being drilled.

"At Aricesti, the gas field, we now have active operations proceeding with several wells, and, during my visit, one adjoining ours belonging to another company, suddenly produced gas at extremely high pressure and in large quantities, so that for the time, at least, it was completely out of control. Arrangements are being made by Captain Masterson in regard to the distribution of gas, when obtained, for use for our own purposes, and also for the supply to the town of Ploesti for which we have the sole monopoly.

JOHN L. RICH
PETROLEUM GEOLOGIST
Special service in tracing of "shoestring" oil and gas pools
OTTAWA, KANSAS

J. ELMER THOMAS
CONSULTING GEOLOGIST
751 First National Bank Bldg.
CHICAGO, ILL.

FREDERICK G. CLAPP
Consulting Geologist and Petroleum Engineer
30 Church St., New York City

ROSWELL H. JOHNSON
GEOLOGIST AND APPRAISER
Oil and Gas Bldg.
University of Pittsburgh
PITTSBURGH, PA.

Robert H. Wood Virgil O. Wood
WOOD & WOOD
GEOLOGISTS AND PETROLEUM ENGINEERS
Phone Cedar 1725
302 Commercial Bldg.
TULSA, OKLA.

CARL B. ANDERSON
GEOLOGIST AND PETROLEUM ENGINEER
804 Kennedy Bldg.
TULSA, OKLA.

CHARLES T. KIRK
CONSULTING GEOLOGIST
American and Foreign Fields
Osage 2820, 9504
Suite 523 Mayo Bldg.
TULSA, OKLA.

SAMUEL J. CAUDILL
Geologist and Petroleum Engineer
Valuation—Depletion
For Financial or Income Tax Purposes
1016 Atlas Life Bldg., Tulsa, Okla.

Wilbur E. Brown G. Thomsen, Jr.
BROWN & THOMSEN
GEOLOGISTS
218½ West Grand Ave.
OKLAHOMA CITY, OKLA.

H. H. MESSIMER
TANK GAUGING ENGINEER
Prompt, Efficient Tank Table Service
Prices Reasonable
P. O. Box 257 105 Midco Bldg.
Phone Osage 3142
TULSA, OKLA.

BERNARD H. LASKY
PETROLEUM ENGINEER AND GEOLOGIST
Appraisals and Valuations for Financial Purposes
Geological Reports
Special Economic Investigations
208 Tuloma Bldg. TULSA, OKLA.

BROKAW, DIXON, GARNER & McKEE
GEOLOGISTS
PETROLEUM ENGINEERS
Examinations, Appraisals
Estimates of Oil Reserves
120 Broadway New York

Amil A. Anderson Frank B. Anderson
ANDERSON & ANDERSON
Mining Engineers and Petroleum Geologists
304 Bitting Building
Wichita, Kans.
Telephone Market 2887

ROBERT W. HUNT CO
Inspecting and Testing Engineers
Inspection of Oil Line Pipe, Oil Well Casing, Tanks, Drums and Barrels
Inspection During Manufacture
Resident Inspectors at Pipe and Steel Mills
2200 Insurance Exchg., Chicago

RALPH M. WEAVER, Jr.
PETROLEUM GEOLOGIST
Wynnewood, Okla.

IRVINE E. STEWART
GEOLOGIST
Great Falls, Montana
421 Ford Building
Denver, Colorado
430 Patterson Building

VERGIL NEAL BROWN
Consulting Geologist and Engineer
Geological Surveys and Appraisals
721 New Wright Building
Tulsa, Okla.

Hector Crandall B. F. Murta
CRANDALL & MURTA
PETROLEUM GEOLOGISTS
Phone Cedar 874
845 Kennedy Bldg. TULSA, OKLA.

GEO. C. MATSON
PETROLEUM GEOLOGIST AND ENGINEER
Geological Surveys, Appraisals for Taxation or Financing
Osage 2049—Phones—Osage 1332
408 Cosden Bldg. TULSA, OKLA.

Frank A. Herald John M. Herald
HERALD BROTHERS
GEOLOGISTS
PETROLEUM ENGINEERS
303 Cosden Bldg. Phone Cedar 5332
TULSA, OKLAHOMA

CLAYTON H. EATON
Consulting Geologist
512 American National Bank Bldg.
Phone 624-R
ENID, OKLA.

JAMES O. LEWIS
PETROLEUM ENGINEER AND GEOLOGIST
724 Kennedy Bldg. Tulsa, Okla.

AUSTRALIAN COMPANY SEEKS OIL IN PAPUA

Mail advices from Melbourne state: An expedition representing an Australian company left on April 17 to develop the first oil lease in the mandated territory of Papua.

When the mandated territory was opened on January 7 for applications to prospect for coal and oil, the Mandated Development Co., of Sydney, which had been formed for that purpose, secured the first lease of 1,000 square miles.

The leader of the party, J. A. Spencer, geologist and surveyor, has had a good deal of experience in New Guinea since 1914, in another oil company. Others in the part include the secretary, Captain Neal, a geologist and medical adviser, E. A. Briggs, M. Sc., who until recently has been lecturer on geology and zoology at the Sydney University, the chief driller, Mr. Ross, a Canadian, who was superintendent driller for a big oil company in Papua, and three others, Messrs. Clark, Mann and Foy.

The Sydney Morning Herald says: The leader of the expedition, John A. Spencer, a New Zealander, was engaged by the Commonwealth Government in 1917, to search for oil in New Guinea. In 1920 he led an expedition inland from the Finch coast towards the Sepik River for the Anglo-Persian Oil Co., covering 2,000 quare miles through unexplored territory and against hostile tribes of natives. Other members of the party include William Ross, an oil driller with 25 years' experience on American oil fields, who has resigned his position as superintendent driller for the Anglo-Persian Oil Co., to take up a similar position with the Mandated Development Co., and Captain N. P .Neal, who has had experience in New Guinea.

TOLD MR. ROCKEFELLER OIL TOO UNCERTAIN

The circle of those who might have gone in with John D. at the beginning and did not still widens, says the Wall Street Journal.

A New York knitwear man who began with nothing and now is worth over a million often recalls the time he passed up the chance to be "really rich." When he first came to this country he used to take care of the garden behind his place of residence. The owner of the adjoining house, who also worked in his garden evenings, finally spoke to him, said he seemed earnest and industrious, found out how much he had saved, and asked him to invest all or part of it in a new business he was just starting—"the oil business."

The new arrival gave the matter thought, sought others' advice, and finally told his neighbor: "Thank you very much for the opportunity, Mr. Rockefeller, but I could not think of risking the savings for which I worked so hard in such an uncertain business."

Now he knows the meaning of the sentence above the board in a certain brokerage office: "He who looks back in this game will die of remorse."

INCREASES TANKER FLEET

NEW YORK, July 5.—The Standard Oil Co. of New York has added four new vessels to its fleet of tank steamers. These are for use in carrying refined oil products from its refinery and distributing stations in New York harbor to points along the New England Coast and up the Hudson River and Erie Canal as far as the Great Lakes. The new vessels are the Boston Socony, Burlington Socony, Oswego Socony, and Rome Socony.

Each vessel is the same size, having a gross tonnage of 1,199 tons and a speed of nine knots per hour, and each has a carrying capacity of approximately 15,000 barrels.

The placing of these new vessels in service is a step toward making the company independent of railroad transportation as far as its marketing operations are concerned.

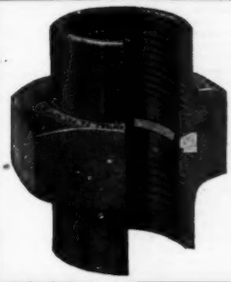
ACCURACY - CONVENIENCE-RELIABILITY

These three ideals are paramount in the construction of Meriam Made Instruments. When your business is in need of Accurate, Convenient and Reliable information there is a Meriam Made Instrument to meet that need.

The Meriam Hydrometer Pot (Illustrated), originated in a Testing Laboratory, under actual working conditions and is designed for quick, accurate work and convenience in handling.

Your own dealer can secure quickly from our stock.

THE MERIAM CO.
8405 Detroit Ave., Cleveland, Ohio



Catawissa Unions, hot forged from high grade steel bars, free from sand and blow holes and unbreakable, cost no more than the best malleable iron unions.

May we mail you a report of an 8,000 lbs. per square inch test given a Catawissa Union?

THE CENTRAL FORGING COMPANY
Catawissa, Pa.

THE KELLY & JONES CO.
WORKS - GREENSBURG PENNA.
BRANCH STORES AND OFFICES { NEW YORK - PITTSBURGH - CHICAGO - CINCINNATI
BUFFALO - ST. LOUIS - SAN FRANCISCO

OIL O AND G GAS

"A REAL OIL COUNTRY BELT"
Manufactured by
IMPERIAL BELTING CO., Chicago
Sold by
OIL WELL SUPPLY CO. In All Fields

FOXBORO ORIFICE METER

A sturdy, accurate Orifice Meter for measuring Casinghead Gas, Natural Gas, Air, Oil, Steam, Gasoline and Water. Write for Bulletin O-113-1.

THE FOXBORO CO., Inc.
Foxboro, Mass., U. S. A.
213 S. Cincinnati Ave., Tulsa, Okla.

FOXBORO
REG. U. S. PAT. OFF.
THE COMPASS OF INDUSTRY
6141

Essex Lubricating Devices Are Oil Country Favorites!

Because they are made right and sold right. 22 years on the market.

Sold by jobbers everywhere.

Catalogue on request

Essex Brass Corporation
2000 Franklin Street
DETROIT, MICH.

Chicago Los Angeles Pittsburgh THERMOMETER which we have the sole monopoly.

Detailed Operations in Western Fields for Month of June

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rigs and wells drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Washington-Nowata-Rogers	0	0	0	0
Osage	145	38,824	24	4
Tulsa	42	5,320	13	5
Okmulgee	59	4,763	21	8
Okfuskee-Hughes-Semino.e-McIntosh	57	29,932	16	5
Muskogee-Wagoner	23	489	6	0
Creek	54	9,674	18	0
Pawnee	14	2,453	2	1
Payne	2	0	2	0
Kay	33	16,880	5	4
Garfield-Noble	4	413	0	0
Carter	39	2,738	6	4
Stephens	17	97	2	4
Miscellaneous	22	301	11	3
Total June	514	111,884	126	38
Total May	598	106,509	178	47
Difference	84	5,375	52	9

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Washington-Nowata-Rogers	0	6	6
Osage	40	199	239
Tulsa	11	34	45
Okmulgee	20	69	89
Okfuskee-Hughes-Seminole-McIntosh	54	198	252
Muskogee-Wagoner	2	15	17
Creek	40	116	156
Pawnee	9	40	49
Payne	2	13	15
Kay	9	89	98
Garfield-Noble	7	66	73
Carter	14	104	118
Stephens-Cotton	4	19	23
Miscellaneous	34	237	271
Total June	246	1,205	1,451
Total May	266	1,342	1,608
Difference	20	137	157

OSAGE COUNTY

33-23-12 Peters et al 2 10
16-21-12 Selby Oil & Gas Co. 15
29-21-12 Barnsdall Oil & Gas 17 45
30-21-12 Barnsdall Oil 16 195
Rex Pyramid Oil 40 10
27-23-11 Owen Osage Oil 294 ..... dry
28-28-11 Owen Osage Oil 287 ..... gas
28-24-10 Western American Oil 7 20
33-24-10 Plains Pet. 7 25
34-24-10 Rex Pyramid 1 ..... dry
34-24-11 Owen Osage Oil 282 ..... dry
21-24- 9 Tidal Osage Oil 2 240
Litrell, Clark et al 3 10
28-25- 8 E. B. Lawson 5 15
8-22- 9 Atlantic Oil Producing 2 20
20-23- 8 Marland Refining 5 3500
Marland Refining 7 2500
18-27- 6 Twin State Oil 14 320
Kewanee Oil & Gas 1 150
13-27- 5 Prairie Oil & Gas 1 545
Midland Oil 1 125
14-27- 5 Midland Oil 15 245
Cosden Oil & Gas 6 30
Cosden Oil & Gas 7 15
Twin State Oil 14 176
28-20-12 Mutual Oil 10 50
18-22-10 Mid-Co Pet. 10 30
32-22-10 Tidal Osage Oil 18 210
5-22-11 Kewanee Oil 10 20
8-22-11 Easley & Thelman 4 ..... dry
8-20-10 Bell Oil & Gas 5 30
17-21-10 Texas Co. 7 10
10-27- 5 Phillips-Delmar 14 300
Phillips-Delmar 15 200
11-27- 5 Phillips Pet. 4 100
13-27- 5 Midland Oil 13 168
14-27- 5 Midland Oil 3 456
Cosden O. & G. 2 65
Cosden O. & G. 3 30
Cosden O. & G. 1 324
Cosden O. & G. 2 372
Cosden O. & G. 7 660
Cosden O. & G. 14 200
23-27- 5 Phillips Pet. 11 225
Phillips Pet. 16 655
Gypsy Oil 12 275
Skelly Phillips 3 100
25-27- 5 Skelly-Phillips 8 40
Skelly-Phillips 9 35
26-27- 5 Phillips-Skelly 4 200
27-29-11 Wiser Oil 3 60
Wiser Oil 4 7
19-29-11 C. F. Lake et al 1 ..... dry
29-29-12 Owen-Osage Oil 245 ..... dry
31-29-12 Jennings Oil 4 ..... dry
Jennings Oil 5 20
36-28- 5 Owen-Osage Oil 285 ..... gas
28-28-11 Owen-Osage Oil 280 ..... gas
Owen Oil 281 ..... gas
33-28-11 Owen-Osage Oil 291 ..... dry
4-27-12 Beacon Oil 1 ..... dry
8-27-12 Pennant Oil 2 ..... dry
32-26-12 Skelton-Moore 5 115
28-24-10 Winona Oil 9 35
Western Oil 8 10
4-23- 9 C. B. Peters et al 12 15
25-24- 8 Tidal-Osage 6 130
14-24- 9 Foster et al 35 25
26-24- 9 Kay County Gas Co. 18 10
20-23- 8 Marland Oil 9-A 35
21-22-10 Higgins, Link Oil 1 ..... dry
29-21-12 Prentice Price 17 ..... dry
33-21-12 Peer Oil 1 ..... dry
28-20-12 Mutual Oil 11 60
16-27- 5 Sinclair Oil & Gas 16 25
32-25-12 Carter Oil 1 ..... dry
27-29-11 Wiser Oil 5 15
35-29-11 Osage Development 38 15
7-26-10 Johnson O. & R. 1 ..... dry
33-26- 8 Midwest & Gulf 1 ..... dry
15-24- 8 Carter Oil 1 ..... dry
16-24- 8 Test Log Oil 2 2720
29-25- 8 Texas Co. 2 10
28-23- 8 A. E. Carlton 1 ..... dry
16-26- 6 Carter Oil 8 605
Carter Oil 9 400
18-27- 6 Twin State Oil 1 30
Kewanee Oil 3 50
Kewanee Oil 8 500
Kewanee Oil 9 245
Kewanee Oil 10 40
37 27- 5 Gypsy Oil 6 15
Gypsy Oil 9 240
10-27- 5 Phillips-Delmar 1 300
11-27- 5 Phillips Pet. 2 200
Phillips Pet. 3 200
Phillips Pet. 7 1000
Phillips Pet. 8 3000
13-27- 5 Prairie O. & G. 2 200
Prairie O. & G. 4 50
Prairie O. & G. 5 375
Prairie O. & G. 7 576
Prairie O. & G. 10 300
Prairie O. & G. 16 1222
Midland Oil 5 150
Midland Oil 16 134
14-27- 5 Midland Oil 9 101
Midland Oil 14 240
Cosden O. & G. 12 200
Cosden O. & G. 16 45
Cosden O. & G. 5 198
Cosden O. & G. 12 200
Cosden O. & G. 13 623
Cosden O. & G. 15 336
Cosden O. & G. 16 417
26-27- 5 Mid-Kansas O. & G. 1 170
32-22-10 Sinclair O. & G. 18 30
34-25-11 Devonian Oil 5 8
11-21- 9 Franchot & Moore 2 25
16-26- 6 Carter Oil 10 396
18-27- 6 Twin State Oil 4 100
Twin State Oil 7 275
Kewanee Oil 4 175
Kewanee Oil 7 463
3-27- 5 Gypsy Oil 5 380
10-27- 5 Phillips-Delmar 2 3000
13-27- 5 Prairie Oil & Gas 3 620
Prairie O. & G. 6 200
Prairie O. & G. 11 220
23-21-12 Brenner Oil 17 ..... dry
28-20-12 Mutual Oil 11 60
33-21-12 Peer & Lorraine 3 ..... dry
21-22-10 Link Oil 1 ..... dry
4-23-11 Owen Osage 292 ..... dry
17-23-11 Owen Osage 284 ..... dry
28-20-12 Mutual Oil 7 900
16-21-12 Selby O. & G. 6 10
13-23-10 Dresser Oil 17 15
23-23-10 Cosden O. & G. 12 10
31-22-11 Breen & Gypsy Oil 2 1560
23-21-10 Breen et al 6 200
25-21-11 Howard et al 8 ..... dry
27-22-10 Tidal-Osage Oil 17 5
32-22-10 Sinclair Oil & Gas 16 5

Wells completed 145
Production 38824
Dry 24
Gas 4
Gas production 5,750,000

TULSA COUNTY

6-19-12 Bruner, S. S. Home 3 125
Bruner, Thompson & Black 4 .. 75
7-19-12 Berryhill, S. S. Home 4 700
16-19-12 Love, Harry McFann 1 ..... gas
29-19-12 Postoak, Gladys Belle Oil 1-A 40
30-19-12 Bodrey, Nowata O. & G. 1 50
9-18-13 Bruner, Elliott & Son 2 ..... gas
Bruner, Pouder & Pomeroy 4 .. 51
16-18-13 Letcher, Posey Short 3 ..... dry
8-19-11 Strip, Equity O. & R. 2 10
13-18-11 Land, T. L. 15 25
18-18-11 Bruner, McLain et al 2-A ..... dry
4-19-12 Patridge A. R. Simmons 1 250
5-19-12 Grayson, Echo Oil 3 360
6-19-12 Bruner, Thompson & Black 5 .. 1000
7-19-12 Berryhill, Sand Springs Home 3 260
Berryhill, Thompson & Black 1 30
McIntosh, Sand Springs Home 6 dry
16-19-12 Colbert, Thornton et al 1 ..... dry
15-19-10 Hartin, Nelson O. & G. 1 ..... dry
26-19-11 Johnson, Superior Oil 2 110
10-16-12 Vann, Thompson & Black 1 ..... gas
4-19-12 Patridge, Shaffer O. & R. 4 ... 1520
5-19-12 Bruner, Minshall & Billingslea 1 200
1-18-12 Edwards, Obins & Webber 7 .. 35
33-18-14 Harkey, Center Oil 6 100
Harkey, Sac & Fox Oil 2-A 10
3-19-12 Grayson, Echo Oil 4 300
1-16-12 Squire, Sam Reeseman 1 ..... dry
11-19-10 Johnson, C. W. Titus et al ..... dry
33-19-13 Landrum, Hancock et al 1 ..... dry
24-18-12 Black & Ranson 3 ..... gas
16-18-13 Walker, Sparks & Olcot 2 15
Rentie, Pouder et al 3 50
Rentie, Black et al 7 40
1-19-11 Page, S. S. Home 1 ..... dry
35-19-11 Inchoe, Jackson & Wise 1 ..... dry
3-18-11 Tahlodge, Geo Smith 1 ..... dry
10-16-11 Pickett, Wiser Oil 10 10
10-19-11 Hodge, Taubman Supply 1 ..... dry
6-19-12 E. Bruner, S. S. Home 4 ..... gas
5-19-14 Watie, J. Hilt 1 ..... dry

Wells completed 42
Production 5320
Dry 13
Gas 5
Gas production 38,250,000

OKMULGEE COUNTY

21-14-14 Morris, Roxana Oil 4 30
27-14-14 Flint, Cosden O. & G. 5 ..... dry
30-14-14 Thomas, Rosedale Oil 11 6
14-15-12 Hogan, Benton & Marshall 1 .. gas
19-15-12 Jefferson, C. F. Noble 3 30
10-15-11 Phillips, Jackson & Wise 2 ..... dry
22-16-12 Wills, Sheridan Oil 7 ..... dry
23-16-12 Flynn, Dickinson 1-A ..... gas
16-14-14 Colbert, Oklahoma Oil 10 ..... dry
19-15-12 Miles, C. F. Noble 3 20
20-15-12 Adams, C. F. Noble 2 20
17-13-13 Gray, C. B. Bunty 5 20
6-12-12 Davis, W. S. McCray 1 ..... dry
30-12-12 Randall, Mitchell Oil 10 ..... gas
25-12-13 Bird, Kingwood Oil 2 127
17-15-11 Carolina, Cole et al 1 170
23-15-11 Hill, LaBein et al 1 ..... gas
14-13-11 Johnson, Gibson & Zahnizer 2 125
Montgomery, Twin State Oil 1 .. 20
24-16-12 Tiger, Okla. Natural Gas 7 1800
Tiger, Okla. Natural Gas 9 45
27-16-12 Coleman, Independent O. & G. 7 75
30-16-12 Grayson, Paraffine Oil 1 ..... dry
34-16-12 Vore, Sheldton et al 1 ..... gas
19-16-13 Grant, Enfisco Oil 1-A ..... dry
7-14-14 Brown, Wilmoot 14 ..... dry
28-13-15 Hutton, Bynum et al 1 ..... dry
24-16-12 Rolland, Okla. Natural 5 ..... gas
3-16-11 Unallotted, Wolford & Webster 4 150
Unallotted, Sheridan O. & G. 1 25
14-15-11 Richards, W. Phillips Oil 8 50
21-15-14 Osborne, Papoose Oil et al 485
34-14-13 Manuel, W. B. Pine 3 5
20-14-14 Sadler, Perkins et al 18 ..... dry
24-13-12 Blackwell, Carter Oil 3 ..... abd
31-13-12 Barber, Wheeler et al 1 30
15-13-14 Scott, Utah Oil 11 130
32-14-14 Ferryman, Archer & Carpenter 3 dry
22-13-12 McIntosh, Clark et al 9 ..... dry
4-11-12 Hawkins, E. & R. Drilling 3 .. dry
5-12-13 Hodges, Detrich et al 1 ..... dry
6-15-11 Willis, H. C. Wilson 1 180
14-15-11 Richards, Waite Phillips 7 85
31-13-11 Holatha, Denver P. & R. 7 ..... dry
32-13-11 Thomas, Denver P. & R. 2 20
Thomas, Denver P. & R. 10 25
5-14-11 Hawkins, Shelton Pine 3 ..... dry
3-11-12 Haggarty, Eagle Picher 2 20
28-13-11 Roberts, H. J. Allison 1 30
21-16-14 Fields, McCullough & Reynolds 3 dry
26-14-14 Flint, H. H. Stein 17 ..... dry
32-13-11 Thomas, Ohiokla Oil 1 125
24-13-12 Thornberry, Iron Mountain Oil 7 380
35-15-14 Miles, Michelin Oil Berlin 11 .. dry
16-14-15 Connors, E. Price 7 ..... dry
7-13-15 Freeman, Marion Oil 2 ..... gas
21-15-14 Osborne, Swindler & Papoose 21 485
14-13-14 Scott, McGranahan 3 ..... dry
26-13-14 Kuhn, Shelton Oil 6 10

Wells completed 59
Production 4763
Dry 21
Gas 8
Gas production 74,500,000

OKFUSKEE, HUGHES, SEMINOLE AND M'INTOSH COUNTIES

12-13- 7 Dyer, Bassett et al 1 30
3-11-11 Hawkins, Spinney et al 1 240
1-12-11 Fisher, Brock et al 2 35
22-10- 8 King, McMan O. & G. 2 938
35- 5-11 Unallotted, Kimbley et al 1 ... dry
4- 9- 9 Alexander, Cosden O. & G. 1 .. 563
4- 9- 9 Alexander, Papoose Oil 2 52
15- 9- 9 Davis, Turman Oil 1 ..... dry
15-10- 8 Alexander, Mid-Kansas O & G 1 912
33- 8- 8 Long, E. P. Harwell 1 1050
20-11-14 McIntosh, Tiger Mountain Oil 3 gas
36-10-12 Unallotted, Carter Oil 1 ..... gas
5-11-11 Sears, Denver P. & R. 1 ..... dry
13-11-11 Holman, Independent O. & G. 2 gas
19-11-1 McCrory, Denver P. & R. 2 ..... dry
35-11-11 Jackson, Atlantic O. & P. 2 .. 288
21-12-10 Tecumseh, Blakely et al 1 ..... dry
30-12-14 Hawkins, Fred Phillips 3 ..... dry
22-10- 8 Tarjo, Holmes & Jarvis 2 1024
3- 9- 9 Davis, Kingwood Oil 2 150
4- 9- 9 Alexander, Papoose Oil 3 50
17- 9- 9 Brown, Transcontinental Oil 1. 150
28- 8- 8 K. Sam, Dixie Oil & Refg. 2 .... abd
Foster, Gypsy Oil 3 ..... abd
29- 8- 8 Walker, Homa-Okla 1 1135
1-12-11 Thompson, H. G. Fair et al 6 .. 10
36-12-11 Rentie, Aztec Oil 3 ..... dry
15-10- 8 Bruner, Wilcox O. & G. 2 150
Bruner, Wilcox O. & G. 4 2538
Z. Stidham, Papoose Oil 1 2410
P. Bruner, J. L. Cromwell 2 150
16-10- 8 Bruner, Amerada Pet. 1 3693
3- 9- 9 J. Davis, Kingwood 3 792
4- 9- 9 Alexander, Berry Pet. 1 2880
17- 9- 9 Smith, Oklavania Oil et al 2 .. dry
20- 9- 9 Bruner, Independent O. & G. 2 dry
33- 8 8 L. B. Long, Pyramid & Refg. 2 100
4- 9- 9 Tiger, Foster Oil 1 528
9- 9- 9 Hill, Papoose Oil 1 125
Hill, Papoose Oil 2 ..... dry
23- 9- 9 Bruner, Wrightsman 1 ..... dry
16-10- 8 Roberts, Cromwell 1 1940
Proctor, Livingston et al 1 2400
22-10- 8 King, Shaffer O. & R. 1 150
King, Shaffer O. & R. 2 2900
King, Cosden O. & G. 2 960
4- 7- 8 Long, Lewis Oil 2 ..... dry
8- 9-12 Smith, Flesher Pet. 1 ..... dry
13-12-11 Sugar, North Baltimore Oil 6 .. 100
34-12-11 Meyers, W. B. Pine 1 25
4- 7- 8 Long, Prairie O. & G. 1 125
19- 8- 8 Townsite, W. R. Ramsey 1 ..... dry
33- 8- 8 Parker, Magnolia Pet. 4 64
25- 8- 7 Rosanna, Dixie Oil 1 130
12-13- 7 Washington, Phillips Pet. 1. dry
5- 9- 9 Carter, Transcontinental Oil 1 90
32- 8- 8 Grayson, Independent & Sinclair 1 40

Wells completed 57
Production 29932
Dry 16
Gas 5
Gas production 54,000,000

MUSKOGEE-WAGONER COUNTIES

12-17-15 Haymie, Sewell et al 2 15
34-16-15 Barnett, Wilson et al 5 ..... dry
19-14-16 Beam, Vogler & Lightner 7 .. 12
12-14-15 Barber, Probst & Morrison 5 .. 10
8-14-19 Jackson, Zollers et al 1 10
18-17-15 Bolton, Talbot et al 1 10
19-17-15 Grayson, Carter Oil 1 10
2-17-16 McIntosh, J. E. Martin 2 20
McIntosh, Gillette & Sewell 1-A 200
McIntosh, E. M. Swanson 1 .... dry
11-17-16 Birney, Young et al 5 25
Unalloted, Sewell et al 2 ..... dry
12-17-16 Watson, O'Dell & Young 2 .... dry
Harris, O'Dell & Young 1 .... dry
Harris, O'Dell & Young 2 10
Harris, O'Dell & Young 3 .... dry
13-17-16 Atkins, J. A. Swindler 1 20
14-17-16 Atkins, Dowd et al 1 25
15-17-16 Berryhill, Whaleback et al 6 .. 10
Berryhill, Whaleback et al 7 .. 15
Berryhill, Harper et al 1 10
Verner, Carder 4 50
30-17-17 Jacobs, Sewell 1 37

Wells completed 23
Production 489
Dry 6
Gas 0
Production 0

CREEK COUNTY

21-17- 9 Raysolt, Prairie Oil & Gas 3.. 25
8-15- 8 Wilson, Roxana Pet. 9 415
Wilson, Gypsy Oil 2 200
Wilson, Gypsy Oil 4 440
17-15- 8 Yahola, Pure Oil 9 1340
35-16- 8 Harjo, H. F. Wilcox Oil & Gas 3 40
35-14- 8 Beaver, Independent Oil & Gas 10 15
18-14- 9 Sneed, Tibbons 2 15
9-16-10 Ralston, Devonian Oil 3 210
32-17- 8 Washington, Olean Pet. 4 1200
Artusse, Sartain Bros. 1 1320
2-19- 7 Sarty, McCray et al 1 60
8-18- 7 Musselman, Magnolia Pet. 23.. 15
13-19- 8 Lowe, J. B. Grieves 2 55
30-19- 9 Jefferson, Sapulpa Refining 2. 25
Jefferson, Sapulpa Refining 3.. dry
15-19- 9 Unallotted, F. O. Howarth 2.. dry
Smith, Shaffer O. & R. 7 ..... abd
23-17- 8 Grayson, W. Phillips 2 100
16-16- 9 McNac, Nowata O. & R. 1 100
8-15- 8 Wilson, Gypsy Oil 6 100
17-15- 8 Mitchell, Jomac Oil 3 270
30-14- 8 Coker, W. Phillips 1 ..... abd
7-19- 8 Griffin, Malcona Oil 1-A 20
3-18- 9 Tiger, H. U. Bartlett 1 ..... dry
16-16- 8 Meyers, Red Bank Oil 1 40
9-16- 9 Self, W. Phillips Oil 1 ..... dry
36-16- 9 Hamilton, Jomac Oil 3 300
10-16-11 Behen, Crosbie et al 12 15
22-15- 8 Yarhola, The Texas Co. 1 35
34-15- 8 Williams, C. G. Tibbens 1 10
5-15- 9 Tiger, Roland Oil et al 2 380
35-14- 8 Beaver, Independent O. & G. 11 10
8-14-10 Tiger, Jenkins et al 2 ..... dry
9-14-10 Harry, Kischner et al 1 ..... dry
21-17- 9 Harchoche, T. & P. Coal & Oil 3 20
9-15- 8 Beaver, Skelly Oil 5 ..... abd
17-15- 8 Wilson, Roxana Pet. 10 152
5-16- 8 Roberts, Newblock Oil 2 25
13-14- 8 Shadid, C. G. Tibbons 1 125
14-14- 8 Durant, Skelly Oil 1 ..... dry
26-14- 8 Johnson, C. G. Tibbons 8 45
33-15-10 Post, Wilcox O. & G. 6 ..... dry
16-14-10 Bear, Donnelly et al 1 ..... dry
17-14-10 Peters, Donnelly et al 1 ..... dry
31-14-10 Scott, Shaffer O. & R. 2 ..... dry
8-15- 8 Robertson, Pulaski Oil 6 25
9-15- 8 Beaver, Chapman 1 ..... dry
17-15- 8 Yahola, Pure Oil 10 1340
Mitchell, Jomac Oil 3 270
5-15- 9 Tiger, Carmen et al 3 383
24-16- 8 Richards, Bu-Vi-Bar Pet. 3 .. dry
36-16- 9 Jomac Oil 3 300
3-18-11 Tahledge, George Smith et al 1 dry

Wells completed 54
Production 9674
Dry 18
Gas 0
Gas production 0

PAWNEE COUNTY

17-20- 7 VanEman, Galvez Oil 1 140
17-20- 6 Atkinson, Davis et al 1 ..... abd
25-20- 7 Imhoff, Burton et al 3 30
Imhoff, Dunagan et al 3 15
8-20 6 Fensfield, Magnolia Pet. 1 40
21-20- 6 Embry, Josey Oil 4 175
25-20- 9 Bean, Mutual Oil 8 25
24-20- 8 Hamilton, Tidal Oil 11 215
33-23- 3 Miller, Watchorn Oil 4 1510
22-20- 6 Cole, Westerly Oil 1 ..... dry
25-20- 9 Townsite, Holbrook & Bartlett 1 ..... gas
8-20-10 Martin, Bell Oil & Gas 5 30
16-20- 7 School Land, Cosden O. & G. 2. 225
16-20- 6 School Land, Elmer Oil 3 45

Wells completed 74
Production 2453
Dry 3
Gas 1
Gas production 500,000

PAYNE COUNTY

27-19- 4 Chevalier, Magnolia Pet. 1..... dry
22-18- 6 Lunday, Riverside Oil 1 ..... dry

Wells completed 2
Production 0
Dry 2
Gas 0
Gas production 0

KAY COUNTY

4-27- 5 Roxana Pet. 11 285
9-27- 5 Prairie Oil & Gas 1 720
Mid-Kansas Oil & Gas 6 1200
Phillips Pet. 6 700
16-27- 5 Phillips Pet. 3 1000
4-27- 5 Phillips Pet. 3 1000
4-27- 5 Gypsy Oil 7 160
9-27- 5 Phillips Pet. 3 2400
Phillips Pet. 6-A 1600
Phillips Pet. 9 1600
Phillips Pet. 10 1200
Phillips Pet. 11 260
Phillips Pet. 14 250
Phillips Pet. 4 300
14-26-2e Bell, Waite Phillips 1 ..... dry
34-25-1w McKee, McCaskey & Wentz 30. 160
Woods, Amerada Pet. 23 ..... dry
35-25-1w Endicott, Slick-Comar 11½ ..... gas
19-25-2e Marland Ref. 6 35
Calls Him, Marland Ref. 3 35
33-23-3e Miller, Watchorn O. & G. 4 ... 1510
23-29-3e Baroman, Johnson & Scott 1 ... dry
17-29-1e Dixon, Vernon O. & G. 1 ..... gas
20-29-1e Shimp, Ostot Dev. 1 ..... gas
29-27-1e Buesing, Alcorn Oil 1 ..... dry
3-27- 5 Phillips Pet. 4 100
9-27- 5 Sinclair O. & G. 5 760
3-27- 5 Carter Oil 2 132
Phillips Pet. 12 ..... dry
9-27- 5 Phillips Pet. 17 300
10-27- 5 Carter Oil 5 520
Carter Oil 6 160
17-28-1e Welsh, McCaskey & Wentz 20.. 1150
16-27-1w Slocum, Anolu Pet. 1 ..... gas

Wells completed 33
Production 16880
Dry 5
Gas 4
Gas production 68,000,000

GARFIELD-NOBLE COUNTIES

2-24-1w Gaume, Comar Oil 17 45
Blubaugh, Comar Oil 25 70
Gaume, Comar Oil 16-A 25
25-22-4w Sinclair Oil & Gas 9 60
30-22-3w Crews, Sinclair O. & G. 5..... 20
2-24-1w Blubaugh, Comar Oil 24-B 20
16-24-1w School Land, Marland-Cosden 10 175

Wells completed 7

Production 413
Dry 0
Gas 0
Gas production .....

CARTER COUNTY

20-2s-2w Sparks, Cotton Belt Pet. 3.... 30 dry
14-2s-3w Stilly, Humble O. & R. 1 60
23-2s-3w Davis, Joe Lathrop 1 20
Laymen, Magnolia Pet. 2 ... 400
Williams, Magnolia Pet. 2 ... 150
25-2s-3w Fee, Westheimer & Daube 2... 100
5-3s-2w Cobb, Atlantic Oil Producing 3
1-4s-2w Noble, Carter Oil 45 160
21-4s-2w Dings, Skelly Oil 2 20
20-2s-2w Laymen, Magnolia Pet. 3 .... gas
23-2s-3w Rexroat, Cotton Belt Pet. 5 .. 15
10-4s-2w Watkins, Iowa O. & R. 1 25
17-5s-1e Baptiste, Amerada Pet. 14 38
20-5s-1e Lahman, Atlantic Oil Prod. 2. gas
25-2s-3w Baptiste, Amerada Pet. 13.... 175
20-5s-1e Noble, Carter Oil 44..... gas
1-4s-2w Fee, Ketch & Wallace 12 60
22-4s-2w Cobb, Merrick et al 4 100
5-3s-2w Lahman, Magnolia Pet. 3 .... gas
23-2s-3w Lahman, Magnolia Pet. 4 160
Jones, Magnolia Pet. 3 35
25-2s-3w Jefferson, Wirt Franklin 1... 80
Harris, Wirt Franklin 1-A.... 75
20-5s-1e Marris, Amerada Pet. 2-A.... dry
23-2s-3w Laymen, Magnolia Pet. 2 80
Davis, Fitzgerald 2 300
25-2s-3w Jefferson, Wirt Franklin 4-A.. 100
16-4s-2w Gazaway, Humble O. & R. 9.... 20
21-4s-2w Norton, Magnolia Pet. 11-A.... 40
22-4s-2w Carr, Magnolia Pet. 14 5
Criner, Amerada Pet. 3 ..... dry
5-3s-2w Cobb, Atlantic Oil Producing 2 100
16-4s-2w Cruce, Magnolia Pet. 18 120
9-4s-3w Apple-Franklin, Lawrence O. & G. 27 ..... dry
15-4s-2w Woodruff, Carter Oil 33 30
Rexroat, Cotton Belt Oil 10 ... dry
16-4s-2w Gazaway, Humble O. & R. 7.. 20
23-2s-3w Townsite, W. Franklin 1 ..... dry
23-2s-3w Palmer, Schermerhorn Oil 4... 220

Wells completed 39
Production 2738
Dry 6
Gas 4
Gas production 42,750,000

STEPHENS-COTTON COUNTIES

4-2s-8w Maloney, Westheimer & Daube 11 ..... abd
20-2s-7w Alexander, Mid-Kansas Oil 1. 35
36-4s-11w West, McBarn Oil 1 ..... dry
2-2s-5w March, Cosden O. & G. 3 8
March, Cosden O. & G. 4.... 7
Dillard, Magnolia Pet. 16... 9
Dillard, Magnolia Pet. 17 8
Bohannan, Albion Oil 5 2
Bohannan, Albion Oil 6 5
Bohannan, Albion Oil 7 6
8-2s-4w Hamiland, Magnolia Pet. 5.... gas
19-1s-8w Worrell, Magnolia Pet. 3.... gas
35-1s-5w Frensley, Skelly Oil 26 4
Frensley, Adams Bros. & Prince 8
Hassel, Pure Oil 4 5
19-1s-8w Brooks, Lone Star Gas 1..... gas
30-1n-8w Hardin, Carter Oil 2 ..... gas

Wells completed 17
Production 97
Dry 2
Gas 4
Gas production 14,000,000

MISCELLANEOUS

Garvin County—
8-1n-5w Derdeyn, Magnolia Pet. 1 .... dry
10-1n-3w Gibson, Magnolia Pet. 4 25
Gibson, T. & P. Coal & Oil 1.. 20
20-4n-4w McKinna, Ethel Oil 1 ..... dry
Grady County—
25-5n-8w Spencer, Stagner 1-A ..... dry
19- 6-5w Carson, Langston et al 1 ..... abd
26-4n-5w Pursley, Roy Nash et al 1 ... abd
17-3n-5w Nichols, Roy Nash 1 ..... dry
36-5n-8w Samuel, Ohio Fuel Oil 1 ..... gas
Pittsburg County—
28-8-15e Cheadle, Eugene Oil 1 ..... abd
Jefferson County—
22-3s-6w Gillmore, Gant et al 1 ..... dry
17-7s-5w Busby, Humble O. & R. 1 .... gas
Pottawatomie County—
18-7-5 Vinson, Magnolia Pet. 1. 6
Pontotoc County—
9-4-6 Ray, American O. & R. 1..... gas
Caddo County—
35-6-9w Fugate, Acme Dev. 2 15
5-5-9w Curshall, English Drg. 2 15
11-5-9w Heilmann, Briscoe & Hall 1..... 50
McKenna, Waldo Pet. 8 80
Heilmann, Briscoe & Hall 2 ... 90
Alfalfa County—
15-24-9w Quinn, Haley, Garber & Pulse 1 abd
Lincoln County—
21-16-3e Huglett, Pryor & Balliere 1 ... abd
16-16- 6 Wyman, Sac Fox Oil 1 ..... dry

Wells completed 22
Production 301
Dry 11
Gas 3
Gas production 38,000,000

OSAGE COUNTY

Rigs

16-26- 6 Carter Oil 14, 15, 16.
18-27- 6 Kewanee Oil 11.
26-27- 6 Phillips Pet. 2, 3, 4, 5.
35-23- 7 Gypsy Oil 10, 11.
1-26- 5 L. D. Simons 7, 13, 14.
26-27- 5 Phillips-Skelly 7, 13.
28-20-12 Mutual Oil 9.
31-21-12 Barnsdall Oil 24.
34-22-10 Tidal Osage Oil 39.
1-22-11 Peer et al 1.
17-23-11 Heinerman-Marshall 8
22-20-11 S. S. Home 80.
23-21-10 Breene et al 8.
6-21-11 C. W. Titus 8.
17-21-10 Breene et al 1.
5-24-11 Maxwell 4.
34-25-11 Devonian Oil 6.
20-29- 9 Winona Oil 3.
26-26- 8 Connell Pet. 1.
22-24- 8 Tidal Osage Oil 7.
32-24- 8 Mutual Oil 8, 19.
24-24- 9 Tidal Osage Oil 13.
26-24- 9 Marland Oil 9.
Tidal Osage & Comar Oil 3.
19-25- 8 Henderson & Holden 4.
27-25- 8 Atlantic Oil Producing 5.
1-23- 9 Atlantic Oil Producing 5-A.
13-23- 8 Twin State Oil 6.
29-23- 8 Marland Oil 4.
17-29- 6 Phillips Pet. 5.

Wells Drilling

7-26- 6 Phillips-Skelly 7.
9-26- 6 Carter Oil 1.
16-26- 6 Carter Oil 11, 12, 8.
17-26- 6 Cosden O. & G. 4, 13, 14.
18-27- 6 Twin State Oil 8, 9, 10, 15, 16.
Kewanee Oil 6, 12.
19-27- 6 Gypsy Oil 14.
20-27- 6 Phillips Pet. 2, 3, 4, 5, 6, 1.
31-25- 7 Vickers & Higgens 1.
3-27- 5 Gypsy Oil 2, 3, 4.
10-27- 5 Gypsy Oil 10.
11-27- 5 Phillips Pet. 5, 6, 11, 15.
13-27- 5 Prairie O. & G. 8, 14, 15.
Midland Oil 10, 16.
14-27- 5 Midland Oil 5, 7, 10, 11, 12, 13, 16.
Cosden O. & G. 4, 5, 11, 13, 14, 15, 6, 8, 9, 10, 11.
25-27- 5 Skelly-Phillips 2, 10.
26-27- 5 Phillips-Skelly 2, 3, 7, 8, 11, 12, 15.
Skelly Oil 1, 2, 3, 4.
Mid-Kansas O. & G. 2, 3, 4, 5, 6, 7.
35-27- 5 Skelly Oil 1, 2, 3, 4.
12-24- 4 Douglas Oil 1.
4-20-12 Barnsdall Oil 12.
6-20-12 Gillespie et al 8.
8-20-12 Gillespie et al 23.
9-20-12 Barnsdall Oil 25.
28-20-12 Mutual Oil 8.
15-21-12 Howard et al 6.
16-21-12 Fidelity O. & R. 5.
29-21-12 Barnsdall Oil 18.
31-21-12 Barnsdall Oil 23.
32-21-12 Barnsdall Oil 19.
34-21-12 J. R. Hadley 1.
1-22-10 Mutual Oil 2.
14-22-10 Gilliland Oil 3.
Osage Arrow Oil 16.
15-22-10 Foster et al 1.
27-22-10 Tidal Osage 17.
32-22-10 Tidal Osage 19.
2-23-10 Gypsy Oil et al 1.
4-23-10 Rex Pyramid 1.
8-23-10 Wiser Oil et al 1.
19-23-10 Superior Oil et al 1, 2.
26-23-10 Rex Pyramid 2.
19-22-11 Riverland Co. 5.
6-20-10 H. G. Gwinnup 1.
12-20-10 S. S. Home 79.
28-20-11 Imler et al 3.
18-21-10 Knupp Oil 2.
23-21-10 Tidal Osage Oil 3.
6-21-11 C. W. Titus et al 7.
19-29-12 Beacon Oil 1.
5-25-12 45 Oil 37.
30-25-12 H. V. Foster 3.
33-25-12 Osage Allegheney 3.
28-28-11 Owen Osage Oil 297
27-29-11 Beacon Oil 6.
Edith Oil 6.
6-26-10 L. Friedman 1.
4-27-10 Owen Osage Oil 295.
10-27-11 Owen Osage Oil 296.
1-25-11 Robinson et al 5.
20-29- 9 Winona Oil 4.
24-26- 8 Mutual Oil 1.
14-24- 8 I. T. I. et al 1.
32-24- 8 Mutual Oil 6.
Foster Oil 36.
22-24- 9 The Texas Co. 2.
23-24- 9 Foster & Norwood 43.
25-24- 9 Winona Oil 2.
26-24- 9 Tidal Osage Oil 6.
32-24- 9 Peters-Oliphant 3, 4.
4-25- 8 Zock-Barnes Oil 1.
21-25- 8 Mid-Kansas O. & G. 1.
28-25- 8 E. B. Lawson 6.
29-25- 8 The Texas Co. 6.
Lewis Oil 1.
33-25- 8 Marland Ref. 2.
34-25- 8 Marland Ref. 3, 4.
31-25- 9 Teat Log Oil 1.
34-25- 9 Dresser Oil 14.
14-22- 8 Riverland Co. et al 4.
29-22- 8 Thompson & Black 2, 3.
3-23- 8 Superior Oil 2, 3, 4.
Independent O. & G. 1, 2.
12-23- 8 Mid-Kansas O. & G. 5.
13-23- 8 Twin State Oil 7.
20-23- 8 Marland Oil 1, 2, 8, 9, 9-B, 10-A, 12, 13, 14.
Red Bank Oil 1, 2, 3, 4.
I. T. I. Oil 322.
29-23- 8 Red Bank Oil 5.
Marland Oil 2, 3.
13-21- 9 S. S. Home 81.
26-21- 9 Gypsy Oil 2.
27-21- 9 Kilgore Oil 3.
21-28- 7 Comar Oil 1.

Shut Down

13-20-12 Devonian Oil 2.
29-20-12 Kennedy & Gillespie 1.
Shaffer O. & R. 1.
5-21-12 C. W. Titus 1.
32-21-12 Barnsdall Oil 18.
33-22-10 Turman Oil 17.
34-22-10 Tidal Osage 38.
Rex Pyramid 3.
5-22-11 Winona Oil 2.
15-21-10 Devonian Oil 1
28-29-12 Mid-Co. Pet. 15.
31-28-11 Tuloma Oil 9-A.
28-29-11 Craig & Campbell 2.
10-27-10 Owen Osage Oil 285.
15-24- 8 McCune et al 2.
28-24- 8 Osage O. & R. 1.
33-24- 9 Riverland Co. 2.
27-25- 8 Atlantic Oil 4.
Delmar Oil 1.
34-25- 8 Mid-Kansas O. & G. 1.
10-25- 9 Pawhuska O. & G. 11.
31-25- 9 Devonian Oil 1.
9-21- 9 McKinney et al 2.
3-26- 6 Comar Oil 4.
16-26- 6 Carter Oil 9, 10, 13.
19-27- 6 Phillips-Skelly 13.

Rigs, 40; wells drilling, 199; total, 239.

TULSA COUNTY

Rigs

4-19-12 Partridge, Shaffer O. & R. 6, 7.
5-19-12 Town Lot, H. C. Wilson 1.
Grayson, Echo Oil 5, 7, 8.
28-19-12 Yargee, Pennok Oil 1-W.
29-19-12 Grayson, Brooks Bros. 1.
1-18-12 Edwards, West et al 11.
22-19-10 Unallotted, Jones & Burton 1.
26-19-11 Johnson, Superior Oil 3.

Wells Drilling

4-19-12 Partridge, Shaffer O. & R. 5.
Partridge, A. R. Simons 2.
5-19-12 Grayson, Echo Oil 6.
Partridge, Thompson & Black 2.
6-19-12 Bruner, S. S. Home 3, 4.
7-19-12 Berryhill, S. S. Home 2, 5.
8-19-12 Yargee, Morgan et al 1.
16-19-12 Colbert, Harry McFann 1.
18-19-12 Grayson, S. S. Home 2.
30-19-12 Betrey, Munn Bros. 1.
5-18-13 Fields, Posey Short 4.
9-18-13 Franklin, Ora Upp 2.
11-18-13 Simon, Newbrough & Hazel 1.
10-16-12 White, Sheridan Oil 5.
6-16-13 Cowles, Superior Oil 2.
8-16-13 Berthoif, Suppex & Abbott 1.
15-16-13 Tiger, Enfisco Oil 11-A.
2-19-10 Grayson, W. W. Harter et al 1.
4-19-10 Grayson, Hivick et al 2.
7-19-10 Burnett, Eastern Oil 1.
14-19-10 Nero, Henry & Avers 1.
22-19-11 Russell, E. R. Minshall et al 4.
25-19-11 Davis, S. S. Home 7.

Shut Down

8-19-12 Harrison, C. H. Terwilleger 3.
Lot, B. F. Caldwell 1.
Lot, Six-and-One Oil 1.
20-19-12 Thornton et al 5.
13-18-12 Obin, Associated O. & R. 6.
9-18-13 Bruner, Elliott & Son 3.
16-18-13 Perkins, Vick Oil 9.
3-16-12 Whetstone, Taylor & Weber 1-A.
30-17-14 Depriest, R. C. McCullough et al 1.

Rigs, 11; wells drilling, 34; total, 46.

OKMULGEE COUNTY

Rigs

16-15-14 Unallotted, Payne & West 1.
13-13-14 Thornberry, Iron Mountain Oil 5.
14-13-14 Scott, Utah Oil 12.
7-13-15 Freeman, Lambert O. & G. 6.
5-15-12 Bell, Taylor et al 1.
28-15-13 Brown, Shelton et al 2.
9-14-13 Simmer, A. W. Cline et al 1.
10-11-13 Bruner, U. S. Zinc 2.
34-12-12 Grayson, O. F. Dickerson 1.
4-15-11 Lewis, D. D. Mickelson 1.
11-15-11 Adams, Cosden O. & G. 3.
16-15-11 Johnson, Waite Phillips 1.
17-15-11 Carolina, Shaffer O. & R. 1.
14-13-11 Johnson, Gibson & Zahnizer 3.
Montgomery, Twin State Oil 2.
22-13-11 Scott, Chas. Delbert 1.
22-16-12 Wills, Waite Phillips 6.
27-16-12 Coleman, Independent O. & G. 8.
36-16-13 Ackley, Newblock et al 1.
22-14-14 Wright, Kewanee O. & G. 15.

Wells Drilling

18-15-12 Cousins, Farris et al 2.
31-15-12 Adams, Sam Bright 2.
2-13-12 Thomas, Brock & Mee 1.
Gentry, King et al 3.
22-13-12 Atkins, J. H. Rebold 1.
17-13-13 Gray, Bunty et al 3.
3-14-13 Leader, Max Moore 1.
17-14-13 Berryhill, Lapsey et al 3.
7-11-12 Hawkins, Moffett & French 2.
8-11-12 Summers, Henryetta O. & G. 2.
9-11-12 Hawkins, Moffett et al 2.
7-12-12 Timer, A. D. Morton 2.
10-12-12 Larney, E. R. Black 2.
27-12-12 Wolfe, Vanderwide et al 1.
20-12-13 Henry, Southern States Oil 1.
25-12-13 Unallotted, Black Pet. 1.
3-15-11 Grayson, Enfisco Oil 2.
Grant, Clover Bros. 2.
Grayson, Jackson & Wise 2.
6-15-11 Wills, Montrose Oil 5.
7-15-11 Marshall, Guardian Oil 6.
10-15-11 Cooper, Beggs Oil 13.
32-15-11 Gooden, Meisner et al 2.
12-15-11 Stephens, Pollyanna Oil 6.
14-15-11 Richards, Waite Phillips 8.
Grayson, Transcontinental 1.
14-13-11 Thompson, Wood Oil 3.
17-13-11 Lefford, Prairie O. & G. 1.
23-13-11 Murrell, Phillips-Gypsy 5.
26-13-11 Murrell, A. B. Ice et al 2.
35-14-11 Unallotted, H. D. Preston 1.
32-16-12 Clayton, W. E. Smith et al 2.
34-16-11 Rose, Paraffin Oil 5.
9-14-15 Corbray, H. W. Lampton 2.
16-15-14 Unallotted, Payne & West 1.
19-15-14 Harrison, W. O. Shock 3.
13-13-14 Barnett, Iron Mountain Oil 6.
22-13-14 Fox, Prairie O. & G. 10.
Fox, Curtis & Aiken 5.
23-13-14 Scott, Lunday Pet. 10.
24-13-14 Stake, Kingwood Oil 7.
16-13-15 Lovett, Helena Oil 3.
2-14-14 Star, Invaders Oil 4.

Shut Down

16-14-14 Colbert, O. P. & R. 5.
14-15-12 Sheppard, Frazier 1.
33-13-12 Webster, Keaton & Gold 1.
28-14-13 Alexander, Baker et al 1.
4-11-12 Hawkins, Henryetta O. & G. 5.
5-11-12 Hawkins, Moffett et al 3.
8-11-12 Summers, Gillette & Kerr 2.
18-11-12 Fish, Phillips Pet. 1.
26-11-12 King, Jess Rebold 1.
15-11-13 Grayson, Clark et al 1.
6-12-12 Mitchell, Gladys Belle Oil 5.
Grayson, Southern States Oil 1.
12-12-12 Davis, Beanis & Wilder 1.
17-12-13 Laskey, W. C. Newman 2.
14-15-11 Grayson, Sheridan Oil 3, 4.
8-13-11 Scott, Central National 1.
23-13-11 Morgan, Stebbins O. & G. 3.
31-14-11 Tiger, George William 1.
22-16-12 Wills, Pulaski Oil 4.
24-16-12 Roland, Oklahoma Natural Gas 5.
34-16-12 Barnett, Southern States Oil 1.
5-15-14 Bruner, Murphy & Tilly 1.
6-13-15 Foster, Lambert O. & G. 3.
29-14-15 Carter, Bonnert et al 2.
32-14-15 Carter, Bonnert et al 2.

Rigs, 29; wells drilling, 69; total, 89.

OKFUSKEE, HUGHES, SEMINOLE; AND McINTOSH COUNTIES

Rigs

3- 9- 9 Davis, Kingwood Oil 5.
4- 9- 9 Alexander, Papoose Oil 8.
Tiger, Transcontinental Oil 2, 3.
Alexander, Berry Pet. 4.
Tiger, Foster Oil 2.
Carter, Skelly Oil 1.
5- 9- 9 Willis, Sinclair O. & G. 1.
8- 9- 9 Brown, White Eagle O. & R. 1.
17- 9- 9 Brown, H. F. Wilcox O. & G. 3.
Brown, Margay Oil 7.
Brown, Roxana Pet. 1.
18- 9- 9 Brown, Arkansas Fuel Oil 2, 3.
Brown, Cosden O. & G. 1.
Brown, Magnolia Pet. 2, 3.
20- 9- 9 Simon, Minnehoma O. 1.
4-10- 8 Fixico, Laurel O. & G. 1.
9-10- 8 Bruner, Pure Oil 2, 3.
Dinner, Cromwell et al 2.
10-10- 8 Brown, Henry Greis 2.
Berryhill, Roxana Pet. 1.
15-10- 8 Bruner, Wilcox O. & G. 37.
Tiger, Cosden O. & G. 2.
Tiger, Waite Phillips 1.
16-10- 8 Bruner, Amerada Pet. 6.
Proctor, Waite Phillips 1.
Baker, Superior Oil 2.
Roberts, Cromwell 1, 2.
Proctor, Livingston Oil 3, 4, 5.
21-10- 8 Harjo, Tidal Osage Oil 8.
22-10- 8 King, Shaffer O. & R. 7, 8.
King, Cosden O. & G. 3.
Yahola, Cosden O. & G. 1.
28- 8- 8 Foster, Dixie Oil 5.
29- 8- 8 Joseph, Amerada Pet. 2.
Walker, Magnolia Pet. 1.
Walker, Dixie Oil 4.
17-12- 7 Henechuche, Kiskaddon et al 1.
35-10-12 Queen, Carter Oil 1.
11-11-11 Scott, Bingham & Smith 12.
35-11-11 Smith, Atlantic Oil Producing 2.
28-12-10 Nivens, Independent O. & G. 2.
27-12-11 Holmes, Hartman et al 3.
30-12-11 Shelton, Shaffer O. & R. 1.
34-12-11 Holm, Anglo-Texas 1.
4-13- 8 Saryokiche, Link Oil 2.

Wells Drilling

18- 8-10 Irvine, Dixie Oil 2.
13- 6-11 Middle States Oil 1.
3- 9- 9 Davis, Kingwood Oil 4.
Grayson, Gibson et al 1.
Grayson, Slick 1.
4- 9- 9 Alexander, Papoose Oil 4, 5, 6, 7, 9.
Semon, Atlantic et al 1, 2.
4- 9- 9 Tiger, Transcontinental Oil 1.
Alexander, Berry Pet. 2, 3.
10- 9- 9 Hill, Gypsy Oil 1.
17- 9- 9 Brown, H. F. Wilcox O. & G. 1, 2.
Brown, Gilcrease Oil 2, 3.
Brown, Margay Oil 1, 2, 5, 6.
Brown, Roxana Pet. 2.
18- 9- 9 Brown, Gladys Belle Oil 1.
Brown, Magnolia Pet. 1.
20- 9- 9 Simon, Gilcrease Oil 2.
4-10- 8 Dunn, Central National Oil 1.
9-10- 8 Bruner, Pure Oil 1.
Dinner, Cromwell & Gardner 1.
10-10- 8 Brown, Henry Greis 1.
Little Carter Oil 1.
Brown, Carter Oil 1.
Little, McMan O. & G. 1.
Brown, Roxana Pet. 1, 3, 3, 4.
Buckner, Roxana Pet. 1.
15-10- 8 Bruner, Gypsy Oil 2, 3, 4.
Stidham, Gypsy Oil 2, 3, 4.
Willis, Gypsy Oil 1, 2.
Bruner, Wilcox O. & G. 3, 4, 5, 6.
Yahola, Cosden O. & G. 1, 2.
Willis, Cosden O. & G. 3, 4.
Alexander, Mid-Kansas O. & G. 3, 3, 4.
16-10- 8 Bruner, Amerada Pet. 2, 3, 4, 5, 7.
Baker, Superior Oil 1.
Roberts, Cromwell 3, 4.
Bruner, Gypsy Oil 1, 2, 3, 4, 5, 6.
Bruner, Hoffer Oil 2, 3, 4.
Proctor, Livingston Oil 2.
21-10- 8 Harjo, Tidal Osage Oil 2, 3, 4, 5, 6, 7.
Harjo, Independent O. & G. 1, 2.
22-10- 8 King, McMan O. & G. 3, 4.
Yahola, Carter Oil 1, 2.
Harjo, Jarvie & Holm 3.
King, Shaffer O. & R. 3, 4, 5, 6.
King, Cosden O. & G. 1.
Yahola, Berry Pet. 1.
35-10- 8 Cunard, Independent & Wedwell 1.
18-10- 9 Carolina, Independent O. & G. 1.
33-10- 9 Barnett, Midwest & Gulf 1.
7- 7- 8 Mason, Cosden O. & G. 1.
14- 7- 8 Jacobs, Producers & Refiners 1.
5- 7- 9 Miller, Fuhrman Pet. 1.
12- 7- 9 Hawks, Kingwood Oil 1.
12- 8- 8 Culler, Roxana Pet. 1.
21- 8- 8 Bowlegs, Magnolia Pet. 1.
28- 8- 8 Foster, Gypsy Oil 2.
29- 8- 8 Brown, Homaokia Oil 1.
Walker, Homaokia Oil 2.
Joseph, Amerada Pet. 1.
Walker, Dixie Oil 3.
31- 8- 8 Willis, H. C. Staggar 1.
32- 8- 8 Packer, Magnolia Pet. 1, 3.
Long, Dixie Oil 1-B.
33- 8- 8 Long, Dixie Oil 2-A, 3-A.
33- 8- 8 Long, Lewis & Clark 2, 3.
Long, E. P. Harwell 2.
12- 5- 9 Carden, Douglas Oil 1.
33-10- 6 Grayson, Searight 1.
31-10- 7 Harjo, Wrightsman et al 1.
13- 7- 7 Dean, W. R. Ramsey 1.
22- 7- 7 Davis, Transcontinental Oil 1.
17-11-14 Cumberledge, Tiger Mountain Oil 3.
30-12-14 Griffin, Kingwood Oil 1.
3-11-11 Meyers, W. B. Pine 1.
Fields, Cosden O. & G. 4.
11-11-11 Hopwood, Fred Cussack 6.
25-11-11 Barnett, Lyons Pet. 2.
27-11-11 Harjo, Clark et al 1.
35-11-11 Jackson, J. Burns et al 2.
8-12-10 Yahola, Blakely et al 1.
23-12-10 Harjo, Blakely et al 1.
Harjo, Bingham & Smith 1.
28-12-10 Nivens, Burke-Greis 1.
Johnson, Blakely et al 1.
36-12-10 Brook, McMahon 1.
Gray, Atlantic et al 1.
Fisher, Atlantic et al 1.
3-12-11 Grayson, Parshall Oil 2.
12-12-11 Buckley, Henry & Avers 3.
33-12-11 McCoy, Josey Oil 3, 4.
Fields, Josey Oil 1.
Carolina Independent O. & G. 1.
Jacobs, Independent O. & G. 1.
4- 9-11 Baker, Tidal Osage Oil 2.
9- 9-11 Holt, Tidal Osage Oil 2.
Baker, Mid-Kansas O. & G. 1.
11-10-11 Fife, Transcontinental Oil 1.
29-10-11 Cubbee, Fisher & Umburn 1.
17-11-10 Dunson, E. R. Black 1.
4-13- 8 Saryokiche, Iron Mountain Oil 2.
25-11- 9 Hill, Robinson et al 1.
11-12- 8 Unallotted, Western States Oil 1.
25-12- 9 Callahan, C. W. Wangerine 1.
36-12- 9 Pittman, Henry Avers 1.
1-10- 9 Wind, Skelly & Cosden 1.
33-10- 9 Johnson, Midwest & Gulf 1.
35-10- 9 T. B. Slick et al 1.
33- 8- 8 Foster, Sinclair O. & G. 3-A.
29- 8- 8 Walker, Sinclair O. & G. 3.
32- 8- 8 Grayson, Sinclair O. & G. 1, 2.
9-10- 8 Bunner, Sinclair O. & G. 1.
23- 7- 7 Carolina, R. H. Smith 1.
25- 8- 7 Rosanna, Magnolia Pet. 1.
25- 6- 6 Mingo, Slick et al 2.
33- 6- 6 Charty, Harvey et al 1.
18- 6- 7 Sanny, T. B. Slick 1.

Shut Down

4- 5-11 Mathews 1.
4- 9- 9 Carter, Gibson et al 1.
5- 9- 9 Carter, Transcontinental Oil 1.
31- 9- 9 Bruner, Prairie O. & G. 1.
22- 9- 9 Manley, Josey Oil 1.
29- 9-10 King, Vierson et al 2.
25-20- 9 Lot 12, Holbrook & Bartlett 1.
Lot 1, Mutual Oil 1.

15-10- 8 Tiger, Snowden & McSweeney 1.
36-10- 9 Sand, T. B. Slick 1.
5- 7- 8 Foster, W. H. Thurbier 1.
28- 8- 8 Sam, Dixie Oil 1.
32- 8- 8 Long, Dixie Oil 5-A.
33- 8- 8 Long, Dixie Oil 2-B.
Foster, Dixie Oil 3.
6- 6- 8 Reed, Garland et al 1.
13- 9- 7 Williams, Independent O. & G. 1.
14-10- 7 Key, Killebiew et al 1.
14- 6- 7 Carolina, Link Oil 1.
20- 6- 7 Daisy, McDougal et al 1.
29-11-14 McIntosh, Grundish et al 1.
22-12-14 Smith, McInturf 2.
11-11-11 Hopwood, Enterprise Oil 5.
15-11-11 Tucker, Deaner & Edgar 8.
25-11-11 Barnett, Gypsy Oil 3.
30-11-11 Holmes, Plummer 4.
34-11-11 Barnett, Oklahoma Oil 4.
35-11-11 Smith, Atlantic Oil Producing 1.
17-12-10 Unallotted, Blakely et al 1.
24-12-10 Fisher, W. K. Snyder et al 3.
25-12-10 Berryhill, Wedell et al 1.
3-12-11 Grayson, Parshall Oil 2.
33-12-11 McCoy, Josey Oil 2.
Grayson, Anglo-Texas 1.
32- 9-10 King, Vierson et al 2.
4- 9-11 Byrd, Magnolia Pet. 2.
24-14- 9 Penn, Phillips Pet. 1.
30-11- 8 Unallotted, Foster 1.
18-10- 9 Carolina, Independent O. & G. 1.
Rigs, 54; wells drilling, 198; total 252.

MUSKOGEE-WAGGONER COUNTIES

Rigs

20-13-16 Willingham, Egolf Oil 1.
12-15-15 Corbray, Jack Summers 1.

Wells Drilling

15-13-16 Toney, Cakes & Sheppard 5.
19-14-16 Barnett, Probst et al 2.
13-13-15 McGilbra, J. S. McCutcheon 1.
1-17-15 Carmichael et al 1.
14-16-14 Franklin, McBray et al 1.

Shut Down

6-13-16 Callahan, Jack McCutcheon 2.
36-13-17 Arnett, Douglas & Haller 1.
29-14-16 Browning, R. D. Valentine 4.
35-14-16 Luster, J. A. DeWitte 1.
18-14-17 James, W. A. Patterson 5.
27-14-17 Dean, E. C. Foltz 1.
27-15-15 Charles, Turin Oil 4.
34-14-15 Durand, Wilson et al 1.
12-17-15 Brown, Tillman et al 1.
25-16-14 Roberts, J. H. White 1.
Rigs, 2; wells drilling, 15; total, 17.

CREEK COUNTY

Rigs

26-15-10 Sewell, Plymouth Pet. 4.
8-14-10 Tiger, Damar Oil 4.
17-14-10 Peters, Donnelly 2.
Johnson, Hall & Donnelly 1.
31-14-10 Burnett, Independent & McMahon 2.
Burnett, Waite Phillips 2.
Scott, Shaffer O. & R. 3.
34-14-10 Flanagan, Cosden O. & G. 1.
30-18-10 Smith, Sapulpa Fuel 1.
6-18-11 Hays, Hartman-Williams 1.
32-18-11 Drew, Cross et al 3.
9-16-10 Ralston, Devonian Oil 4.
13-19- 8 Ruth, Larsen Bros. 1.
14-19- 8 Lewis, Kiskadden & Crane 2.
15-19- 9 Manley, Shaffer O. & R. 2.
14-17- 8 Johnson, Atlantic Oil Producing 1.
23-17- 8 Grayson, Waite Phillips 2.
32-17- 8 Washington, Olean Pet. 1.
Washington, Page Bros. & Savoy 2.
Artusse, Sartain Bros. 2.
Washington, O. P. & R. 2.
17-15- 8 Yahola, Pure Oil 14.
Peck, Skelly Oil 1.
20-15- 8 Beaver, Skelly Oil 2.
26-15- 8 Norchubby, Bu-Vi-Bar Pet. 2.
4-16- 9 Renfro, Kelly et al 1.
6-19- 9 Barnett, T. & P. C. O. 1.
9-16- 9 Bethel, Gypsy Oil 1.
10-16- 9 Field, Wolfe Oil 2.
15-16- 9 Barnes, Carter Oil 2.
20-16- 9 Barnett, Dickenson et al 1.
35-16- 9 Harnes, U. S. Cities O. 2.
13-14- 8 Bearhead, Billingsley 1.
14-14- 8 Bearhead, Margay Oil 2.
24-18- 8 Doyle, Kaufman & Lewis 1.
26-14- 8 Johnson, C. G. Tibbons 10.
26-19- 7 Bruner, Lyon Pet. 1.
12-16-11 Gilgray, Shaffer O. & R. 1.
32-16-10 Bemore, Phillips Pet. 3.
35-16-10 Froe, Hartman-Williams 1.

Wells Drilling

27-15-10 Harry, Cumberlain Oil 1.
33-15-10 Post, Wilcox O. & G. 9.
Gooden, W. J. Hartman 4.
4-14-10 Lamos, Tom Kelly 1.
9-14-10 Tiger, Selby Oil 1.
21-14-10 Scott, Kistler et al 1.
31-14-10 Scott, Independent O. & G. 2, 3.
Barnett, Darby Pet. 2.
32-14-10 Mitchell, Cosden O. & G. 1.
10-17-10 Baker, J. M. Bell et al 1.
17-17-11 Cooper, Ireland et al 1.
32-17-11 Fuleom, Oklahoma Natural Gas 1.
10-18-10 Caser, Skelly Oil 4.
30-18-10 Smith, Bob Bailey 1.
4-16-10 Tiger, Hartman et al 1.
2-19- 8 Vincent, Mann & Smith 1.
7-19- 8 Griffith, Malcona Pet. 1.
12-19- 8 Grayson, J. B. Groves 1.
23-19- 8 Hanan, Howarth O. & G. 1.
26-19- 8 Foster, Kiskadden & Crane 1.
15-19- 9 Postoak, Shaffer O. & R. 1.
17-19- 9 Unallotted, Midwest & Gulf 1.
27-19- 9 Cherry, T. A. Johnson 1.
31-19- 9 Barnett, Selby O. & G. 1.
18-14- 9 Sneed, C. G. Tibbens 3.
22-14- 9 Mayo, C. W. West 1.

Shut Down

27-15-10 Sewell, Prairie O. & G. 1.
5-14-10 Yahola, Stubblefield 1.
8-14-10 Tiger, Damar Oil 1.
11-17-10 Baker, Howarth O. & G. 2.
13-17-11 McIntosh, Albert Shelton 1-A.
13-19- 8 Ross, Shaffer O. & R. 1.
24-19- 8 Knight, Superior Oil 1.
16-19- 9 Postoak, Shaffer O. & R. 8.
Mattox, Kinney 3.

Wells Drilling

21-17- 8 Stidham, Transcontinental Oil 2.
24-17- 8 Harjo, Waite Phillips 2.
Fife, C. P. Davis 1.
28-17- 8 Browning, O. P. & R. 1.
18-17- 9 Winn, Bu-Vi-Bar Pet. 1.
31-17- 9 Roberts, Prairie O. & G. 3.
29-18- 9 Scales, McClung et al 2.
2-15- 8 Heneha, H. F. Wilcox O. & G. 10.
8-15- 8 2½ acres, Producers & Refiners 1.
Wilson, Roxana Pet. 8.
Wildcat, Gypsy Oil 6, 8.
29-15- 8 Pelah, Mid-Kansas O. & G. 1.
35-15- 8 Hill, C. G. Tibbons 1.
4-15- 9 Wisener, Phillips Pet. 4.
5-15- 9 Buckner, The Texas Co. 1.
7-15- 9 Jefferson, Roland Oil 1.
17-15- 9 Wolfe, Turman Oil 1.
29-15- 9 Colbert, McCree et al 1.
30-15- 9 Field, Billingslea 2.
5-16- 8 Pitman, Prairie O. & G. 6, 7, 8.
Roberts, Newblock Oil 5.
6-16- 8 Wills, Olean Pet. 2, 4.
22-16- 8 Arsoyles, Peters Oil 3.
23-16- 8 Deer, Lorraine Pet. 2, 12.
Peters, D. B. Mason 4.
25-16- 8 Buckner, Roland Oil 1.
29-16- 8 Fixico, Atlantic Oil Producing 1.
Hawkins, Lynch et al 1.
35-16- 8 Harjo, H. F. Wilcox O. & G. 9.
9-16- 9 Self, Waite Phillips 1.
Childers, Jomac Oil 3, 4, 5.
16-16- 9 McNac, Fartain Bros. 4, 5.
Nowata O. & R. 2.
13-14- 8 Bearhead, Prairie O. & G. 2.
17-14- 8 Har-Lar-Cher, Shaffer O. & R. 1.
26-14- 8 Johnson, C. G. Tibbons 9.
30-14- 8 Kirnal, Prairie O. & G. 5.
36-14- 8 Beaver, Independent O. & G. 1.
18-14- 9 Oglesby, C. G. Tibbons 1.
22-14- 9 Mays, West et al 1.
2-18- 7 McGilbra, Barnes Oil 3.
4-16- 7 Connors, Magnolia Pet. 3.
36-16-10 Harrison, Independent & Bassett 1.

Shut Down

32-17- 8 Washington, Olean Pet. 2, 5.
Washington, Page Bros. & Savoy 1.
6-17- 9 Unallotted, Malcona Pet. 1.
32-17- 9 Tiger, Neilson et al 1.
17-18- 9 West, Jarvis & Holm 2.
15-15- 8 Warnocke, Cosden O. & G. 1.
Warnocke, Gypsy Oil 1.
16-15- 8 Fish, Gypsy Oil 1.
17-15- 8 Yahola, Pure Oil 11, 12, 13.
Roberts, Eastern Oil 1, 3, 4.
21-16- 8 H. C. Wilson 1.
22-16- 8 Sloan, Cortez Oil 5, 6.
Knoll, Laurel O. & G. 6, 7.
Cane, Gypsy Oil 2.
34-16- 9 Brady, Transcontinental Oil 1.
9-14- 8 Ahlequah, Cohan et al 1.
11-14- 8 McDaniels, Billingslea et al 2.
29-14- 8 Robinson, Phillips Pet. 1.
30-14- 8 Brown, Waite Phillips 1.
18-14- 9 Sneed, C. G. Tibbons 1.
24-14- 9 Penn, Phillips Pet. 1.
8-16-12 Marshall, E. R. Minshall 4.
Rigs, 40; wells drilling, 116; total, 156.

PAWNEE COUNTY

Rigs

17-20- 7 Van Eman, Galvez Oil 3.
8-21- 6 Simmons, Wood & Farren 1.
Calclasier, Amerada Pet. 1.
26-21- 4 Schermerhorn, Independent O. & G. 1.
24-20- 8 First National Bank, S. W. Oil Fields 6.
4-22-3e Arkota, Magnolia Pet. 1.
1-20- 6 Peck, Josey Oil 1.
8-20- 6 Sharp, Magnolia Pet. 1.
17-20- 6 White, Watchorn O. & G. 4.

Wells Drilling

1-20- 5 Conley, Pruitt Drilling Co. 1.
14-20- 5 Leon, Haley et al 1.
24-20- 8 Bates, Tidal Oil 1-A.
Hennessey, Wallace et al 1.
14-20- 9 Eckley, Jones & Brann 1-B.
Beam, Mutual Oil 9.
9-22-2e Arkota, Magnolia Pet. 2.
4-22-3e Ely, Magnolia Pet. 2.
Miller, Magnolia Pet. 5.
5-22-3e Altaffer, Magnolia Pet. 1.
Wolfe, Magnolia Pet. 1.
33-22-3e Miller, Watchorn O. & G. 1, 5, 6, 9, 11.
Miller, Mariand Ref. 2.
4-20- 7 Townsite, Mason et al 2.
17-20- 7 Van Eman, Johnson O. & R. 2.
18-20- 7 Ritchie, Garland et al 1.
25-20- 7 Brann, Smith & Dwire 5.
36-23-4e Willard, Cosden O. & G. 1.
1-21- 5 Hill, C. J. Wrightsman 1.
9-20- 6 Goring, Magnolia Pet. 1.
16-20- 6 School Land, Jim Glenn Oil 3.
School Land, Elmar Oil 3.
17-20- 6 Goring, Watchorn O. & G. 1.
Trevesdale, Carter Oil 4.
28-20- 6 Allen, Davis et al 1.

Shut Down

25-20- 9 Lot 6, Holbrook & Bartlett 1.
33-23-3e Miller, Watchorn O. & G. 8.
25-22- 6 Bell, Victor Oil 1.
4-20- 7 Vick Oil 1.
8-21- 7 Kinsley, R. E. Freeman 1.
21-21- 7 Hussey, Flight et al 1.
27-21- 7 Daniels et al 1.
5-23-5e Phillips, Mosier et al 1.
26-23-5e Acco Oil 1.
Rigs, 9; wells drilling, 40; total, 49.

PAYNE COUNTY

Rigs

36-19- 5 Fills, Josey Oil 4.
34-19- 4 Saunders, Twin State Oil 1.

Wells Drilling

21-19- 6 Underwood, Magnolia Pet. 1.
8-19- 5 Armour, Garr Oil 1.
35-19- 5 Strip, Home Gas 1.
30-18- 6 Berryhill, Home Gas 1.
6-19- 4 Dunn, T. B. Slick 1.
34-19- 4 Main, Magnolia Pet. 3, 10.
23-18- 4 Mulberry Oil 2.
2-18- 5 Laughlin, Shaffer O. & R. 10.
18-18- 5 Meyers, Carter Oil 1.

Shut Down

2-20-2e Conley, Colorado O. & G. 1.
20-17- 5 Strong, Grimes et al 1.
30-18- 5 Cochran, Cassidy et al 6.
Rigs, 2; wells drilling, 13; total, 15.

KAY COUNTY

Rigs

21-28-4e Johnson, Colorado O. & G. 1.
2-26-4e Baum, Schundler et al 1.
16-27-1w Slocum, Anulu Oil 4.
16-25-2w Smith, Mariand Ref. 1, 2.
Thompson, Alcorn Oil 1.
21-25-2w Kirk, Carter Oil 1, 2.
22-25-2w Giles, Twin State Oil 1.

Wells Drilling

4-27- 5 Roxana Pet. 9, 12.
George Bole 5.
Laurel O. & G. 3.
Comar Oil 2, 3.
Gypsy Oil 3, 6, 9, 10.
8-27- 5 George Bole 1.
9-27- 5 Skelly-Moore 1.
15-27- 5 Twin State Oil 15.
16-27- 5 Skelly-Phillips 3.
14-28- 4 Mathews, J. E. Miller 1.
6-26- 2 Hadley, Alcorn Oil 1.
7-27-2e Williams, Comar Oil 1.
17-25-2e Mean Bear, Mariand Ref. 2.
18-25-2e Walking Sky, Mariand Ref. 2.
19-25-2e Primeaux Mariand Ref. 2.
21-29-1w Duncan, Roxana Pet. 1.
15-27-1w Johnson, Ostot & Poling 2.
16-27-1w Slocum, Ostot Dev. 1.
Arnold, Kay & Kiowa 1.
30-26-1w Frazier, Bailey & Thornton 1.
33-25-1w McKee, McCaskey & Wentz 18, 45.
Beverlin, Comar Oil 1-W.
Endicott, Comar Oil 1-W, 2-W 3-W, 4-W, 5-W.
34-25-1w Endicott, Comar Oil 6, 7-W.
Woods, Amerada Pet. 33, 34.
Endicott, Pennok Oil 1-D, 2-D, 3-D, 4-D, 5-D, 8-D.
McDaniels, Blackwell O. & G. 1-C, 7-A.
35-25-1w Endicott, Slick-Comar Oil 2-E, 3-E, 4-E, 5-E, 6-E, 7-E, 8-E, 1-A.
Endicott, Comar Oil 1-W, 5-W, 7-W, 10-A.
Ogg, Comar Oil 1-W.
36-25-1w Koppenbrink, Comar Oil 4.
14-25-1e Hoy, Waldo et al 1.
8-26-2w Smith, Dey Oil 1.
12-26-2w McCullough, Alcorn Oil 1.
North, Mariand Refining 1.
21-25-1w Thomas, McCaskey & Wentz 1.

Shut Down

3-27- 5 Phillips Pet. 2, 3.
4-27- 5 Roxana Pet. 7.
16-27- 5 Gypsy Oil 3.
9-28- 4 Hardy-Douglas Oil 1.
11-28-1e Lowery, Oklahoma Northern Oil 1.
15-28-1e Trenary, Grand Island O. & G. 1.
26-26-1w Farlers, Dance et al 1.
3-27-1w Rohrs, Ostot Dev. 2.
10-27-1w Crouch, Blackwell O. & G. 1.
16-27-1w Langbrey, National Union Oil 2.
Slocum, Manahan 1, 3.
Slocum, Analu Oil 3.
21-27-1w Vandever, Alcorn Oil 1.
13-27-1e Kelfer, Producers & Refiners 1.
33-25-1w Russell, Mariand & Cosden 3-A.
McKee, McCaskey & Wentz 29.
35-25-1w Endicott, Comar Oil 4.
35-25-1w Ogg, Comar Oil 3.
23-20-2w Flwell, Guyler & Daniels 1.
4-25-2w Bollinger, Smith Claire Drlg. 1.
15-25-2w Thomas, Mariand Refining 1.
27-25-2w Simmons, W. E. Brown 1.
36-25-2e Davis, Emery & Leeright 1.
Rigs, 9; wells drilling, 89; total, 98.

GARFIELD-NOBLE COUNTIES

Rigs

2-24-1w Blubaugh, Comar Oil C-7A.
25-23-1w Burnaide, Jankowsky et al 1.
7-21-3w Kettner, Chaffee et al 1.
36-22-4w Heim, Ima O. & G. 9.
11-21-4w Boepple, Boepple et al 2.
19-22-3w Crews, Sinclair O. & G. 12.
25-22-4w Windler, Sinclair O. & G. 14.

Wells Drilling

12-21-3e Sayre, Ossenbeck et al 1.
27-21-3e Kinsley, Mariand Ref. 1.
31-21-3e Christy, Colorado O. & G. 1.
2-24-1w Clark, Gypsy Oil 72, 78, 81, 82, 83, 84, 85.
Gaume, Comar Oil 1-W, 12-B, 15-A.
Blubaugh, Comar Oil 8-C, 15-B, 23-B, 25-A, C-4B, C-5A, C-5B, C-8, C-9, C-10A.
3-24-1w Carmichael, Comar Oil 4, 6-W, 11-W.
Ruzek, Blackwell O. & G. 4-C.
9-24-1w Gravel, Ponca O. & G. 1.
11-24-1w Rence, Healdton O. & G. 13-B.
McCutcheon, Comar Oil 1.
29-24-1w Case, Mid-Co Pet. 11-A.
21-23-1w Forman, B. E. Walters O. & G. 1.
11-23-2w Wright, Tidal Oil 1.
15-23-2w Neal, Tidal Osage Oil 15.
15-21-2w Sams, Bu-Vi-Bar Pet. 1.
19-22-2w Crews Estate, Crews O. & G. 14.
24-22-4w Belveal, Healdton O. & G. 26.
25-20-4w McCullough, Danciger Oil 1.
10-20-5w Ray, Atlantic Oil Producing 1.
22-21-4w Miller, Rosenthal et al 1.
26-23-7w Cox, Catharine Oil 1.
25-22-4w Frickenschmidt, Sinclair O. & G. 10.
Hoy, Sinclair O. & G. 19.
31-22-3w Morrison, Sinclair O. & G. 7.
18-22-3w Shaffer, Sinclair O. & G. 8.
25-22-4w Windler, Sinclair O. & G. 13.

Shut Down

14-24-2e Kemple, Ossenbeck et al 1.
20-24-2e LeClair, Ossenbeck et al 1.
2-24-1w Gaume, Comar Oil 14-A.
3-24-1w Carmichael, Comar Oil 18-B.
15-24-1w See, Comar Oil 7-A, 15.
20-24-1w Rood, Eureka Oil 1.
32-20-1e Boyce, Nelson & Hayden 1.
22-24-2w Corbry, Wilkerson & Gore 1.
1-22-2w White, Frank & Kelly et al 1.
25-22-4w Hotson, Fenwire O. & F. 19.
36-22-4w Heim, Ima O. & G. 8.
20-22-4w Cruce, Hollingsworth et al 1.
3-22-5w Wengert, Martin et al 1.
31-21-5w Camp, Summers O. & G. 1.
6-23-6w Hess, Weir-Wood Oil 1.
17-23-8w Dibley, Bullock et al 1.
Rigs, 7; wells drilling, 66; total, 73.

CARTER COUNTY

Rigs

28-1s-3w Jennings, Templeman et al 2.
30-2s-2w Dings, Skelly Oil 3.
31-2s-3w Bennett, Magnolia Pet. 4.
23-2s-3w Laymen, Magnolia Pet. 3, 4.
25-2s-3w Adams, Neustadt 1.
Dolman, Atlantic Oil Prod. 2.
26-2s-3w Swarts, Magnolia Pet. 5.
8-3s-2w Bledsoe, Schermerhorn 1.
15-4s-2w Rexroat, Cotton Belt Pet. 11.
21-4s-2w Noble, Carter Oil 43-46.
Ward, Carter Oil 21, 22.

Wells Drilling

17-5s-1e Fee, Iowa O. & R. 3.
20-5s-1e Parre, Amerada Pet. 15.
Gardner, Amerada Pet. 3.
29-5s-1e Baptiste, Amerada Pet. 3.
34-5s-1e Butler, Amerada Pet. 2.
10-1s-3w Gray, Magnolia Pet. 1.
18-1s-3w Hardin, Magnolia Pet. 1.
20-1s-3w Gove, Simpson-Fell 1.
28-1s-3w Morton, Wirt-Franklin 7.
Jennings, Humble O. & R. 2.
Brouton, Lathrop et al.
29-1s-3w Spears, Humble O. & R. 1, 1-B.
32-1s-3w Hart, Magnolia Pet. 1.
33-1s-3w Lusk, Humble O. & R. 1.
34-1s-3w Miller, Simpson-Fell 1.
19-2s-2w Harris, Westheimer et al 1.
30-2s-2w Sparks, Cotton Belt Pet. 7.
31-2s-2w Palmer, Patsy Oil 3.
Bennett, Magnolia Pet. 7.
Fowler, Westheimer & Daube 6.
32-2s-2w Moyer, Healdton O. & G. 1.
Palmer, Schermerhorn 4-B.
22-2s-3w Carpenter, Wirt Franklin 2.
Laymen, Wirt Franklin 1.
Carpenter, Humble O. & R. 1.
23-2s-3w Laymen, Magnolia Pet. 1-E, 2, 3, 6, 7, 3.
Williams, Magnolia Pet. 1.
Davis, Twin State Oil 1, 2, 3.
Fitzgerald, Twin State Oil 1.
Laymen, Humble O. & R. 1, 2.
Cruce, Skelly Oil 1, 2, 3.
Davis, Fitzgerald 3.
Davis, C. R. Smith 1.
Davis, Fox Pet. 1.
24-2s-3w Adams, Humble O. & R. 1.
Fulsom, Cameron Ref. 1, 2.
25-2s-3w Simpson, Skelly Oil 2.
Tucker, Magnolia Pet. 7.
Jefferson, Twin State Oil 3, 4.
25-2s-3w Laymen, Magnolia Pet. 1.
Jefferson, Twin State Oil 5.
Wolfe, Great Southern Oil 6.
26-2s-3w Swarts, Magnolia Pet. 4.
Fee, C. R. Smith 6.
35-2s-3w Brooks, Rockland Oil 6, 9.
5-3s-2w Cobb, Merrick et al 1-A.
Dickerson, Schermerhorn 1-B, 3.
Fee, Wirt Franklin 1-A, 2.
6-3s-2w Palmer, Patsy Oil 1, 7, 10.
Ponder, Acco Oil 1.
10-4s-2w Walker, Fell Oil 2.
15-4s-2w Woodruff, Carter Oil 33.
16-4s-2w Schellenberger, Westheimer 17.
21-4s-2w Noble, Carter Oil 39.
Horton, Magnolia Pet. 12-A.
Noble, Skelly Oil 13.
Ward, Gypsy Oil 11.
22-4s-2w Dillard, Skelly Oil 16.
Hefner, Carter Oil 17, 18.

Shut Down

19-1s-2w Morris, Groom et al 1.
28-1s-3w Jennings, Templeman et al 1.
31-2s-2w Bennett, Kirk Oil 12.
14-2s-3w Lyles, E. F. Harwell 1.
15-2s-3w Carpenter, Wildwood Oil 1.
22-2s-3w Carpenter, Humble O. & R. 2.
23-2s-3w Town Lot, Wirt Franklin 1, 2.
Davis, Hawks & Ware 1.
24-2s-3w Smith, Magnolia Pet. 1, 3, 4.
27-2s-3w Fee, C. R. Smith 5.
McClure, Paige Oil 4.
8-3s-2w Harrison, Noble O. & G. 1.
9-4s-2w Walker, Humble O. & R. 14.
15-4s-2w Martin, Sure Oil 7.
22-4s-2w Dillard, Humble O. & R. 8, 9.
Dillard, Westheimer 15.
4-4s-3w Lowery, Pure Oil 3.
Johnson, Roxana Pet. 20.
Mullen, Twin State Oil 17.
Jones, Coline Oil 37-A.
13-5s-3w Beal, Wickenhiser & Ross 1.
27-3s-2e Brown, Home Oil 1.
Rigs, 14; wells drilling, 104; total, 118.

STEPHENS COUNTY

Rigs

14-1n-9w Atkins, Waldham et al 1-B.
25-1n-9w Harris, Magnolia Pet. 9.
22-1s-8w Worrell, Fisher et al 3.
33-1s-8w Ramsey, Magnolia Pet. 16.

Wells Drilling

3-1n-4w Graham, T. & P. Coal & Oil 1.
Simpson, Hawks & Ware 1.
19-1n-5w Payne, Magnolia Pet. 1.
30-2n-5w Colbert, Montgomery 1.
10-2s-6w Harley, National Ref. 1.
30-1n-8w Maxey, Gypsy Oil 2.
25-1n-9w Ketchum, Humble O. & R. 3.
17-1s-8w Dolan, Ellis Drilling 1.
18-1s-8w Johnson, Calhoun Oil 4.
20-1s-8w Brittion, Malcolmee 7.
22-1s-8w Worrell, Fisher et al 2.
27-1s-8w Rice, Grigsby Oil 1.
32-1s-8w Blaydes, Amerada Pet. 11.
33-1s-8w Surber, McMan Oil 15.
25-1s-9w Alexander, Base Line Oil 4.
29-1s-9w Bendon, Lone Star Gas 1.

Shut Down

23-1n-9w Routon, Douthitt 1.
Brown, Walters et al 1.
33-2n-9w Vanhouser, Samuels et al 1.
Rigs, 4; wells drilling, 19; total, 23

MISCELLANEOUS

Rigs

Beckham County—
31- 8-21w Unknown, Kouri et al 1.
32- 9-23w Unknown, Foster & Santrock 1.
Coal County—
1- 1-1I Nichols, G. F. Vaughn 1.
18-2n- 9 Hicks, Dillard 1.
Grady County—
6-10- 8w Ballard, Bowles & White 1.
Grant County—
8-26- 5w Biggs, Jarvis et al 1.
Kingfisher County—
17-19-6w Hank, Jens Marie Oil 1.
Lincoln County—
11-14- 6 Barber, Texas Co. 2.
12-14- 6 Brace, Roxana Petroleum 3.
Townsite Wheeler & Webb 1, 2.
12-14- 6 Townsite Dowell et al 2.
Lewis Roxana Petroleum 1.
—Logan County—
28-15-1w Ganough, Lambert et al 1.
33-18-3w Guier, Haley & Smith et al 1.
35-17- 4 Manley, Closing Roy 1.
Pontotoc County—
5- 4-4e Starrett, Craig et al 1.
5- 4-5e Starrett, Craig et al 1.
14- 4-7e Norris, Howarth O. & G. 1.
Roger Mills County—
10-16-21w Scaba, Kellogg et al 1.
33-13-21w Fields, Texas Oil Dev. 1.
Texas County—
4- 1-12 Allison, Home Dev. Co. 2.

Wells Drilling and Shut Down
(Shut Down Wells Indicated by *)

23-24-11w Twin Bull, Armstrong et al 1*.
21-27-10w Watts, McGinnis & Ward et al 1.
Beaver County—
33- 5-28e Dewey, Gate Valley Oil 1*.
6-1-20e James, Empire 1*.
17- 3-23 Unknown, Skaer 1*.
Beckham County—
34-10-24w Green, Belleau et al 1*.
15-10-22w Wilkerson, Phillips et al 1*.
15- 9-23w Montgomery, Magnolia Pet. 1*.
15- 9-23w Goldsmith, Sayre O. & G. 1*.
19- 8-21w Van Vector, Kadane et al 1*.
18- 9-22w Seidel, Christmas et al 1*.
35-10-23w Unknown, Simpson et al 1*.
35- 9-25w Gibson, Grimes et al 1.
21- 9-23w Roberts, like Williams 1*.

14- 8-22w Unknown, L. I. Lyons 1*.
26- 8-22w Totty, Kouri et al 1.
13- 9-23w Kight, Foster Oil 2.
Kight, Prince & Prince 1*, 3*.
16- 9-23w Sheets, Sayre O. & G. 1*.
6- 9-24w Burkhalter & Pringle et al 1*.
29- 9-23w Baker, Caudill & Cravey 1.
31- 9-23w Windle, Carter Oil 3.
14- 9-23w Ingram, The Texas Co. 1*.
Blaine County—
7-18-10w Cronister, Byers et al 1*.
21-15- 10w Erlenmeier, Okoma Oil 1*.
22-15-11w Lookabaugh, Pringred & Farron. 1*.
Caddo County—
11- 5- 9w McKenna, Lawhead et al 2.
Hedland, Briscoe & Hall 3.
8-11-12w West, Birmingham & Kelsey 1*
Canadian County—
24-13- 9w Dawson, Ponca O. & G. 1*.
2-13- 6w Wrightsman & Revals 1.
Cherokee County—
18-19-21 Unknown, Adkison et al 1*.
30-17-22 Benge, Beeler et al 1.
6-16-22 Unknown, Corridan et al 1*.
13-19-23 Unknown, Gahoma O. & G. 1*.
Cimarron County—
22- 5-9e Martin, Campbell, Riley et al 1*
Cleveland County—
21-10-4w Rowland, Garr Oil 1*.
Coal County—
24-1n-8e Jefferson, McPherson et al 1*.
24-2n- 9 Park, Bassell Oil 1*.
Comanche County—
33- 2-9w School land, Samuels 1.
24-2-10w Cox, Cherry et al 1.
Custer County—
1-15-15w Rough, Parker O. & G. 1*.
26-15-18w Hatcher, Price & Pringley 1*.
1-14-14w Boone, Gulier & Cassenbeck 1*.
32-13-14w Fry, Pauline Oil 1*.
15-15-20w Unknown, Twin Hill Oil 1.
Dewey County—
22-16-18w Fiders, Morton et al 1.
Ellis County—
2-21-24w White, Gage O. & G. 1.
Garvin County—
3- 1- 2w Pipejoy, Kennedy et al 1*.
21- 4- 1w Florence, Aetna Oil 1*.
18-1n- 3w Derdyn, Murphy et al 1.
18- 1- 3w Cowen, Magnolia Pet. 24.
10-2n-3e Huttall, Heath & Bowman 1*.
10- 1- 3w Gibson, Magnolia Pet. 4-A, 4, 8, 5.
17-1n-3w Derdyn, Texas Co. 5.
18-1n-3w Derdyn, Texas & Pacific 1.
31-1n- 2w Prince, Harvey Brothers 1*.
18-1n-1e Richardson, Binder et al 1*.
Grady County—
28- 3- 5w Pearcy, Magnolia Pet. 1.
28- 3- 5w Harrison, Magnolia Pet. 1.
7- 3- 5w Horton, Roy Nash 1.
17- 5- 7w Nail, Nichols Drilling 2.
30- 5- 6w Gray, Luginbyhl et al 1.
8- 4- 5w Spencer, Gant Becker 1.
11- 3- 5w Sherrell, Gant Becker 1.
Grant County—
27-27-3w Lane, Western States 1.
3-26- 4w McKenna, Wrightsman 1.
20-26- 4w Edwards, Emery & Lcright 1*.
26-27- 3w Snouffler, Associated P. & R. 3*.
22-25- 4w Volmer, Myers O. & G. 1.
19-25- 5w Reynolds, Hutchinson et al 1.
23-29- 3w Hofman, Ossie Oil 1*.
8-27- 5w Moon, Midwest & Gulf 1*.
11-26- 5w Bonham, Broadhurst & Foster 1.
14-25- 5w Midgley, Myers O. & G .1*.
23-27- 3w Martin, Kay Oil 3.
29-29- 4w Ridings, Phillips Pet. 1.
22-27-3w Lane, Blackwell O. & G. 2.
14-27- 3w Howell, Blackwell O. & G. 1.
30-27- 4w Fuss, Thraves et al 1*.
Greer County—
23- 7-23w Diamond, Western Nat. Gas. 1*.
1- 7-22w Johnson, Neal et al 1.
27- 7-22w Bowman, White & Debolt 1*.
Jackson County—
21-3n-22w Perriman, Texas Guarantee 1.
36-2n-23w Unknown, Ship et al 1.
Kingfisher County—
30-16-9w Burton, Pansy Oil 1*.
25-17- 5w Smith, Bryssey & Hines 1*.
30-15- 7w Vogt, F. & N. Oil 1.
Kiowa County—
34-7-16w Indiana Land, Conner et al 2.
3-7-17w Unknown, Aubyme Oil 1.
Lincoln County—
1-14- 6 Zoller, Roxana Pet. 2, 5, 6, 7, 8.
Welch, Amerada & Wrightsman 1, 2.
2-14- 6 Brooks, W. Phillips & Sinclair 1.
Jackson, Union Pet. & Supply 2.
2-14- 6 Schubel, Union & W. Phillips 1.
9-14- 6 Doolen, Prairie O. & G. 1.
11-14- 6 Jackson, Roxana & Wolverine 2.
11-14- 6 Barber, The Texas Co. 1.
12-14- 6 Dowell, J. A. Hull 4, 5, 6, 7.
13-14- 6 Petty, J. A. Hull 1.
Townsite, Union Pet. 2, 3, 4, 5, 6, 7.
Townsite, Willis O. & G. 1, 2.
Lewis, Amerada Pet. 2, 3, 5, 8.
12-14- 6 Brace, Roxana Pet. 1, 2.
Brace, Gypsy Oil 1.
Townsite, Dowell et al 2.
Townsite, C. F. Noble 1.
28-17- 2 Unknown, Plateau Oil Co. 1*.
2-13-16 Unallotted, H. F. Wilcox 1.
16-16- 4 School Land, Sartain Bros. 1*.
17-15- 3 Powell, The Texas Co. 1.
15-15- 6 Lovett, Blankenship et al 1.
21-14- 6 Scheiff, Stroud O. & G. 1*.
6-15- 6 Earp, Independent O. & G. 1.
34-15- 5 Edwards, Flynn & Morgan 1.
7-14- 4 Norton, Heinz & Green 1.
7-13- 3 & Ewing, Douglas Oil 1.
14-13- 6 Heinzig, Prod. & Ref. 1.
18-13- 5 Keller, Sun Ray Oil 1.
2-14- 5 Ely, Flynn & Morgan 1.
7-14- 5 Ayers, Magnolia Pet. 1.
18-14- 5 Bray, Magnolia Pet. 1.
18-14- 5 Wilson, Jennings Bros. 1.
13-14- 5 Leake, Pure Oil 1.
20-14- 4 Spencer, J. C. Cooke 1.
23-17- 3 Young, R. W. Willis 1.
20-17- 5 Linsley, Grimes et al 1*.
23-15- 2 Jones, F. O Howarth 1.
32-15- 4 Dodrill, Magnolia Pet. 1.
1-15- 6 Bowers, McMan O. & G. 1.
16-14- 5 Sac & Fox, J. C. Cook 1.
8-13- 6 Lewis, Mountain States Oil 1.
26-13- 2 Walker, Eugene Corta 1.
8-13- 5 Richardson, J. C. Cook 1.
Logan County—
26-15-2w Baker, Oklahoma Drg. 1*.
32-19-3w Newman, Burford & Brim 1.
23-16-1e Pritchard, Magnolia Pet. 1.
8-18-2w Wyatt, Mulhall Oil 1*.
28-16-1w Driggs, Pluto O. & G. 1*.
28-18-4w Moore, Franklin Oil 1.
Major County—
9-22-9w Unknown, Bradstreet Oil 1.
36-21-11w Williams, Frantz & Slick 1.
Murray County—
29- 2- 2 Murray, Black Pet. Co. 1.
Oklahoma County—
36-11-3w Unknown, McBeth 1.
Pittsburg County—
29- 6-13 Townsend, Richards 1*.
13- 7-12 Love, Paraffin Oil 1*.
22- 3-13 Fee, Ward Smith 1*.
Pontotoc County—
28-3n-4e Lollins, Dixie Oil 2*.
Marlow, Valerius et al 1*.
28- 3- 4 Doughery, Valerius et al 1.
19- 5-7e Edwards, Howarth O. & G. 1*.
32- 5-5e Brown, Carter et al 2*.
6- 3-7e Alberson, Lloyd & Smith 1.
4- 3- 7 Walker, Empire G. & F. 1.
24- 4-4e Dunagan, C. J. Wrightsman 1.
28- 4- 7 Porter, Hughes et al 1.
34- 4-6e Perry, Lancaster & Smith 1*.
34- 5-6e Stringer, Bowles & Smith 1*.
Pottawatomie County—
19- 7- 4 Neglinguet, Pierce & McMan 1*.
4- 5-5e McFarland, Riverland Oil 1*.
9- 5- 3 Ball, Day Oil 1*.
13-11- 3 Unknown, Blaumer et al 1*.
10- 6- 2 McGee, Davy et al 1.
13-10- 2 Howell, Ossie Oil 1.
25-10- 4 Brooks, T. F. McMann 1.
Pushmataha County—
33-2n-19e Peachwood, Anchor Oil 1*.
31-3n-15e McGee, George et al 1*.
Roger Mills County—
1-16-21w Unknown, Mutual Oil 1*.
28-14-23w Lindell, Porter Lease Synd. 1*.
3-13-26w Baker, Concord Oil 1*.
32-16-22w Unknown, Colorado Oil 1.
15-15-26w McClure, Thomas & Fide 1.
Sequoyah County—
1-11-21 Wilson, Mathes Pet. 1*.
31-21-23 Sanders, J. C. King et al 1*.
Texas County—
6-1n-17e Wood Ranch, Beaver Oil 1*.
Washita County—
9- 8-15w Prettearess, A. D. Morton et al 1.
23- 9-17w Unknown, Hartman et al 1*.
33- 8-18w Ries, Sun Ray & Aubyme 1.
Woodward County—
34-20-20w Unknown, Beard et al 1*.
Woods County—
19-24-14w Whitney, McCray et al 1*.
10-25-15w Buskirk, Victor Oil 1*.

SOUTHERN OKLAHOMA

Rigs

Jackson County—
15-1S-23w Unknown, J. R. Abernathy 1.
Jefferson County—
34-5s-5w Culbertson, Barber et al 1.
9-4s-4w Mullins, Healdton Pet. 1.
4-7s-5w Seay, Couch & Cherry 1.
5-7s-5w Seay, J. O'Donohue 1.
19-7s-5w Reed, Southerland Pet. Co. 1.
21-5s-6w Major, Tarkington & Kelsey 1.
Love County—
29-6s-3e Starrett, Simms Pet. 2.
Johnson County—
29-4s-5e Smith, Mitchell et al 1.
McCurtain County—
35-8s-23e Brown, Noco Pet. 1.
Murray County—
12-1s-2e Lawrence, Stauffer et al 1.
Wells Drilling and Shut Down
(Shut Down Wells Indicated by *)
Atoka County—
7-2s-9e Wyand, McPherson et al 1*.
28-2s-9e Underwood, Wapanucka Dev. 1*.
17-4s-11e Dabney, Hauser et al 1.
1-2s-9e Kemp, Florence Oil 2*.
Bryan County—
32-7s-8e Ramsey, Barlieu 1*.
34-6s-7e Staries, Patterson & Hoffman 1.
26-7s-11e Alexander & Oppenheimer 1*.
11- 6-9e Coombs, Lyons Pet. 1*.
14- 7-7e Love, H. C. Hailey 1*.
6- 5-8e Overton, Haines Oil 1*.
Choctaw County—
2-6s-15e Goekel, Smith et al 1*.
Jefferson County—
31-4s-8w Anderson, Shawver & Sutter 2.
1-7s-6w Seay, Humble O. & R. 1.
3-7s-7w Wray, Jas. Lugg 1.
13-7s-6w Reed, Landis et al 1*.
33-6s-5w Seay, Hamblre Oil 2.
33-7s-6w Stanfield, Elize et al 1*.
34-6s-5w Seay, Clark & Cowden 1*.
Johnston County—
9-4s-4e Trotter, Root et al 1*.
Love County—
11-7s-2e Wilson, Drillers Synd. 1*.
27-6s-2e Draughn, Westheimer & Daube 2*.
17-6s-1w Cluskey, Humble O. & R. 1.
Marshall County—
36-7s-5e Everett, Magnolia Pet. 1*.
18-5s-5e Sacra, Layne-Watson 1.
27-5s-4e Chafney, Van Vlick et al 1*.
18-6s-7e Burney, Alexander & Ellis 1*.
36-5s-6e Holden, United 8 Oil 1.
McCurtain County—
14-9s-25e Harris, Bellworth O. & G. 1*.
15-8s-26e Wilson, Red River Pet. 1*.
Murray County—
11-1s-1e Rowe, Beard & Miller 1*.
Tillman County—
5-5s-15w Hanneville, Fidelity Oil 1*.
23-2s-17w Foster, Luffborough 1*.
10-4s-18w Couch, Spears et al 1*.
34-1s-17w Brink, Luffborough 2*.
Rigs, 34; wells drilling, 237; total, 271.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	8	20	6	1
Montgomery-Wilson-Neosho-Allen	0	0	0	0
Miami-Franklin-Anderson	0	0	0	0
Greenwood-Woodson	60	6,210	12	0
Marion	0	0	0	0
Chautauqua-Elk	3	110	0	0
Miscellaneous	11	3,463	4	2
Total June	81	9,803	22	3
Total May	143	14,758	31	9
Difference	62	4,955	9	6

Summary of New Operations

County—	Rigs	Drg.	Ttl.
Butler	1	8	9
Montgomery-Wilson-Neosho-Allen	0	8	8
Miami-Franklin-Anderson	0	7	7
Greenwood-Woodson	41	62	103
Marion	4	4	8
Chautauqua-Elk	2	7	9
Miscellaneous	25	130	155
Total June	73	226	299
Total May	84	227	311
Difference	11	1	12

BUTLER COUNTY

8-22- 5 Brenkikofer, Phillips Pet. 1 ... dry
5-27- 6 Beadles, Branson et al 1 20
31-29- 7 Blair, Martin & Gray 1 ..... dry
27-28- 5 Meyers, Stroanyder et al 1 .... dry
6-27- 8 Lucas, Liggett et al 1 ..... dry
5-29- 5 Plummer, Morgan et al 2 .... dry
17-27- 7 Know, Ellis 1 ..... gas
6-24- 6 Piatt, Mayflower Oil 3 ..... dry

Wells completed	8
Production	20
Dry	6
Gas	1
Gas production	16,000,000

MARION COUNTY

5-22- 4 Townsend, Watchorn O. & G. 37 75

Wells completed	1
Production	75
Dry	0
Gas	0
Gas production	0

GREENWOOD-WOODSON COUNTIES

7-23-12 Lindsay, Pluaski et al 1 ..... dry
20-23-12 Swanson, R. G. Gillespie 16.... dry
13-23-10 Edwards, Vickers & Johnson 4 dry
17-23-10 Hollis, A. J. Fisher et al 1.... dry
23-22-10 Allen, Mid-Kansas Oil & Gas 18 50
24-23-10 Burkett, Skelly Oil 2 30
Burkett, Tidal Oil 6 20
31-23-10 Martindell, Mid-Kansas Oil & Gas 3 200
32-23-10 Thrall, Mission Oil 3 400
Thrall, Mission Oil 34 80
Thrall, C. E. Roth 1 ..... dry
11-24- 9 Lewis, Polhamus et al 5 175
Olsen, Transcontinental Oil 10 75
12-24- 9 Cannon, Gypsy Oil 2 150
32-24- 9 Hover, Morgan & McCoy 1..... dry
19-25- 9 Ladd, Mid-Kansas Oil & Gas 6 125
16-26- 8 Dickenson, Great Southern Oil 32 35
14-23-13 Bahr, Cosden O. & G. 4..... 25
17-22-10 Browning, D. M. Rhodes & Co. 7 ..... dry
14-22-11 Fromm, Empire G. & F. 2..... 350
27-22-11 Wick, Skelly Oil 12 50
28-72-11 Clark, Gray et al 5 50
32-23-10 McKee, Phillips Pet. 14 400
2-24- 9 Christy, Roth & Faurot 1 ..... dry
34-24- 9 Nixon, Gypsy Oil 5 100
4-25-11 Ott, Phillips & Reynolds 1..... dry
14-24- 9 Cannon, Gypsy Oil 3 270
Cannon, Gypsy Oil 5 300
15-24-12 Fleming, Franklin Oil 1 50
32-23-10 Thrall, Mission Oil 25 150
Thrall, Mission Oil 39 100
Lewis, Phillips Pet. 20 200
17-22-10 Browning, Rhodes et al 6 25
18-22-10 Browning, Rhodes et al 2 200
31-22-10 Leedy, D. A. Weiss 3 100
21-22-11 Soule, Phillips Pet. 1 40
14-24-12 Sullivan, Cosden O. & G. 10.... 40
16-22-10 Bangs, R. G. Gillespie 2 ..... dry
19-22-10 Browning, R. G. Gillespie 2... 150
Browning, R. G. Gillespie 3 ... 120
26-23-10 Mason, Pure Oil 5 50
31-23-10 Martindale, Mid-Kansas Oil & Gas 7 200
32-23-10 Thrall, Mission Oil 4 200
6-24-10 Cartwright, John Rogers 2 175
Cartwright, Mid-Kansas Oil & Gas 2 75
1-24- 9 Marshall, Arkansas Fuel Oil 3.. 200
Heddleson, Lewis Oil 2 ..... dry
Cartwright, Mission Oil 1 20
11-24- 9 Lewis, Derby Oil 2 150
14-24- 9 Hillman, Prairie O. & G. 7..... 60
22-24- 9 Hendrickson, Polhamus et al 1 20
24-24- 9 Moore, Glaymen et al 4 ..... dry
27-24- 9 School Lot, Polhamus et al 1. 5
31-22-10 Mather, Greenwood Oil 3 135
23-23-10 Allen, Mid-Kansas O. & G. 19.. 100
1-24- 9 Marshall, Arkansas Fuel 2 400
12-24- 9 Cannon, Gypsy Oil 4 100
14-24- 9 Broiton, McGinnis, Goebel & Bitler 6 50
23-24- 9 Wiggins, Mission Oil & Rogers 1 150
33-22-11 Greenwood, Jennings Bros. 4.. 40

Wells completed	60
Production	6210
Dry	12
Gas	0
Gas production	0

ELK-CHAUTAUQUA COUNTIES

9-34- 9 Fisher, J. A. Brouk et al 1... 40
12-29- 8 Porter, C. E. Roth & Co. 5..... 70

Wells completed	2
Production	110
Dry	0
Gas	0
Gas production	0

MISCELLANEOUS

Barton County—
2-19-12w Wicker, Neiswanger 1 ..... dry
Chase County—
33-19- 9 Watts Bros., Hepler et al 1... dry
Clay County—
20-9-4e Bradburg, J. F. Boggess et al 1 dry
Cowley County—
31-30-6e Robbins, Lewis Oil 1 425
8-31-4e Pate, Neely Brothers 1 ..... dry
20-33-3e Wertman, Waite Phillips 1..1900
6-31- 6 Eastman, Empire G. & F. 2.. 738
Eastman, Southwestern Pet. 1. 240
31-30- 6 Elliott, C. W. Titus et al 1... 160
8-31- 6 Stout, Garden & Smith 1 ..... gas
Stout, Collins et al 2 ..... gas

Wells completed	11
Production	3463
Dry	4
Gas	2
Gas production	13,000,000

BUTLER COUNTY

Rigs

32-26-6 Shriver, Foraker 1.
Wells Drilling
16-23-6 Hoe, Ramsey 1.
27-24-6 Benson, Imperial Ref. 1.
5-27-6 McLean, Blue Stem Oil 2.
33-27-7 Cleary, Baker et al 1.
10-28-6 Slabough, Mid-Kansas O. & G. 1.
Shut Down
22-28-6 Petit, John Sharp et al 1.
17-28-7 Evertson, Dutton & Morgan 1.
23-28-7 Brewer, Rich et al 2.
Rigs, 1; wells drilling, 8; total, 9.

GREENWOOD-WOODSON COUNTIES

Rigs

10-23-13 Young, Theta Oil 7.
16-23-13 Burris, Peerless O. & R. 1.
15-24-12 Johnson, Franklin Oil 1.
Fleming, Skelly Oil 2.
12-22-10 Sander, Haslett et al 1.
19-22-10 Browning, White Eagle O. & R. 1, 2.
30-22-10 Prather, Skelly Oil 1.
32-22-10 Barnard, Rhodes & Able 1.
16-22-11 Richards, J. R. Milligan 1.
28-22-11 Clark, Phillips Pet. 8.
28-23-10 Thrall, Mission Oil 42, 43.
29-23-10 Thrall, C. E. Roth & Co. 2.
31-23-10 Martindell, Mid-Kansas O. & G. 4, 8.
32-23-10 Thrall, Mission Oil 5, 23, 24.
McKee, Phillips Pet. 9, 17, 18, 19.
5-22-11 Seelp, Phillips Pet. 12.
8-23-11 Clopton Empire Gas & Fuel 12.
6-24-10 Cartwright, John Rogers 5.
16-23- 9 Teter, Empire G. & F. 15.
1-24- 9 Marshall, Arkansas Fuel Oil 4, 5.
12-24- 9 Cannon, Gypsy Oil 7, 8.
14-24- 9 Hillman, Prairie O. & G. 8, 9.
24-24- 9 Hendrickson, Beverly et al 1.
23-24- 9 Wiggens, Rogers et al 3.
34-24- 9 Marshall, Polhamus et al 12.
1-25- 9 Hange, Dingee et al 1.
3-25- 9 Hoover, Phillips Pet. 5.
4-25- 9 Kenley, Pure Oil 3.
26-26- 8 Kerr, Miller et al 1.
36-26- 8 Yenner, Byrne & Nelson 1.
Wells Drilling
10-23-13 Schneider, Theta Oil 19.
14-23-13 Elliott, Manhattan Oil 11.
14-24-12 Sullivan, Houston Oklahoma 3, 4.
7-24-13 Sharp, Limbocker et al 3.
24-21-11 Matile, National Ref. et al 1.
1-22-10 Huntsinger, Day & Connell 1.
17-22-10 Browning, D. M. Rhodes & Co. 5.
18-22-10 Browning, Rhodes & Able 3.
19-22-10 Browning, R. G. Gillespie 4.
Browning, White Eagle O. & R. 1.
14-22-11 Fromm, Empire G. & F. 3.
18-22-11 Clopton, Cosden O. & G. 2.
19-22-11 Harris, Selby O. & G. 1.
27-22-11 Wick, Skelly Oil 13.
28-22-11 Clark, Syndicate Oil 5.
Clark, Eugenia Oil 6.
33-22-11 Greenwood, R. G. Jennings 4.
1-23-10 Bell, Fisher et al 1.
13-23-10 Edwards, Phillips Pet. 10.
22-23-10 Allen, Mid-Kansas O. & G. 5.
28-23-10 Thrall, Mission Oil 41.
30-23-10 Martindell, Mid-Kansas O. & G. 5, 6.
6-24-10 Cartwright, John Rogers 3, 4.
32-23-10 Thrall, Mission Oil 38, 40.
14-25-10 Norman, Jackson et al 1.
15-22- 9 Hughes, Phillips Pet. 1.
16-22- 9 Teter, Phillips Pet. 1.
1-24- 9 Heddleson, Lewis Oil 1.
11-24- 9 Lewis, Polhamus et al 6.
Olsen, Transcontinental Oil 6, 13.
Lewis, Derby Oil 1, 3, 4.
12-24- 9 Cannon, Gypsy Oil 4, 6.
23-24- 9 Heiberson, John Rogers 1.
Wiggens, Rogers & Mission Oil 2.
29-24- 9 Hober, Harry Hoover 1.
31-24- 9 Dorsett, Basom et al 1.
34-24- 9 Marshall, Roxana Pet. 3.
11-25- 8 Teigraber, Plains Pet. 2.
4-26- 9 Kenley, Pure Oil 1.
18-25- 9 Hendrickson, D. H. Morgan 1.
19-26- 9 Ladd, Mid-Kansas O. & G. 4, 7.
Shut Down
34-22-13 Eslinger, Haslett et al 7.
15-23-13 Kembler, St. Louis O. & R. 8.
23-23-13 Hesler, Dresser Oil 7.
Bahr, Cosden O. & G. 8.
11-24-12 Dalton, Franklin Oil 14.
30-22-10 Prather, Mid-Kansas O. & G. 3.
22-24-10 Edwards, J. A. Edwards et al 1.
23-24- 9 Heiberson, Leonard Pet. 1.
30-25- 9 Moss, Derby Oil 11.
24-26- 9 Weirshing, Smith & Carlson 1.
26-26- 9 Dimick, Wahn & Ross 1.
18-28- 9 Dickson, Jameson et al 1.
Rigs, 41; wells drilling, 62; total, 103.

MARION COUNTY

Rigs

15-22- 4 Barton, Orlando Pet. 19.
21-21- 5 Urshel, Federal Oil 4, 5, 6.
Wells Drilling
22-18- 4 Stika, Yonker & Douglas 1.
2-21- 5 Soner, C. Crow et al 1.
18-22- 3 Russell, Amerada Pet. 1.
17-21-4e Roamey, Natural Ref. 12.
Rigs, 4; wells drilling, 4; total, 8.

ELK-CHAUTAUQUA COUNTIES

Rigs

13-29- 8 Green, Page Bros. et al 1.
13-29- 8 Hanna, C. E. Foth & Co. 3.
Wells Drilling
12-29-8 Porter, C. E. Roth & Co. 5, 6.
13-29-8 Porter, Empire G. & F. 1.
14-29-8 Hanna, C. E. Roth & Co. 2.
Shut Down
33-30-10 J. E. Huff 1.
18-32-10 Maloney, McKay et al 1.
28-32-10 McCalister, J. B. Jones et al 1.
Rigs, 2; wells drilling, 7; total, 9.

MISCELLANEOUS

Barber County—
27-32-14w Elsea, B. B. Brown et al 1.
Coffey County—
26-19-13e White Eagle O. & R. 1.
Cowley County—
6-31- 6 Eastman, Southwestern Pet. 2.
29-30- 5 Dunbar, Alcorn Oil 1.
1-31- 5 Lewis, Reese & Aikman 1.
5-31- 6 Eastman, Empire G. & F. 1.
6-31- 6 Eastman, Empire G. & F. 3.
Eastman, Shawver & Sutter 1.
18-30- 6 Banyan, Ramsey et al 1.
5-31- 6 Eastman, Wilson & Martin 3.
8-31- 6 Stout, Phillips Pet. 2.
6-30- 8 Manhannah, Paul Trees 2.
Ellsworth County—
18-17- 7w Unknown, Duquette et al 1.
Graham County—
22- 8-24w Keys Brothers 1.
Lincoln County—
31-21-10w Lambert, Berry & Rosenthal 1.
Love County—
23-13-26w Keys Bros. & Marine Oil 1.
2-11-26w Keys Brothers & Marine Oil 1.
McPherson County—
29-20-5w Lindquist, Benson et al 1.
Russell County—
1-14-11w Whitman, Buell 1.
33-12-11w Cooper, Pouder & Pomeroy 1.
Saline County—
15-15-4w Hollinquirt, Thrall et al 1.
29-14-2w Davis, Johnson Bros. 1.
Sumner County—
16-30-1w Hitchcock, Champlin Ref. 2.
17-30-1w Kraft, Champlin Ref. 1.
Trego County—
23-13-26w Keys & Maine Pet. 1.

Wells Drilling and Shut Down
(Shut Down Wells Indicated by •)

Barber County—
33-30-14w Unknown, Wizard Oil 1.

Barton County—
22-18-13w Everleigh, Mountain States 1.
27-18-12w Sooy, Cheyenne Oil 1•.
31-18-12w S. J. Tall, Haynes 1•.
21-19-12w Unknown, McMahon et al 1.
11-16-12w Schauf, Jasper & Beschka 1.
17-19-11w Smith, Huffine et al 1.

Chase County—
19-21- 6 Giffith, Security O. & G. 1•.
19-19- 8 Koub, Dave Alter et al 1•.
15-22- 9 Hughes, Phillips Pet. 1.

Clark County—
20-32-21w Unknown, Watchorn O. & G. 1.

Cloud County—
6- 6- 4w Unknown, Concordia O. & P. 1•.

Coffee County—
14-23-13 Elliott, Manhattan Oil 9.
Bahr, Cosden O. & G. 2.

Cowley County—
18-32- 6 Harrison, Southwestern 1.
6-23- 3 Allbright, W. Phillips 1.
9-33- 3 Wood, Alcorn Oil 1.
20-33- 3 Westman, Hill & Phillips 2, 3.
Glasco, Hill & Phillips 2, 3.
20-33- 3 Johnson, W. Phillips et al 2, 3.
34-33- 3 Shehan, Marland Oil 1•.
29-33- 3 Hansen, Phillips & Gypsy 1.
34-33- 4 Dover, Hartman & Skaer 1.
35-30- 3 Gats, Shawver & Tatlock 1.
32-31- 4 Brasher, Brown Brothers 1.
12-32- 4 Holt, Arkansas Fuel 2.
24-32- 4 Deifelder, J. A. Hull 9.
24-32- 4 Kukuk, Buffalo Trust 8.
9-35- 6 Eckhardt, Phillips Pet. 1.
1-35- 7 Smith, Tidal-Osage 3.
18-32- 3 Dunn, Bryan & Stinson 1.
7-31- 6 Eastman, Foster & Collins 1.
10-35- 5 Warren, Trees Oil 1.
33-34 3 Bocoston, A. Rich et al 1.
14-31- 4 Sherwood, Trees Oil 1.
3-31- 5 Perry, Vickers Pet. 1.
18-31- 6 Shannon, Arkansas River Gas 1.
5-31- 6 Spahr, C. W. Titus et al 1.
5-31- 6 Spahr, Southwestern Pet. 1.
6-31- 6 Eastman, Titus et al 1.
Eastman, Southwestern Pet. 3, 4.
Eastman, Southwestern Pet. 4, 5, 6
32-31- 6 Balldue, F. L. Balliere 1.
10-30- 3 Charlton, Midwest & McNabb 2.
14-30- 4 Magnuson, S. & S. Oil 1.
31-30- 6 Robbins, Lewis Oil 2.
8-31- 6 Stout, Phillips Pet. 1•.
26-31- 3 Waite, Arkansas Fuel 1•.
17-31- 6 Harris, Boggers & Collins 1.
15-30- 4 Newton, S. & S. Oil 2.
31-30- 6 Elliott, Lewis Oil 2.
24-30- 6 Ward, C. E. Christy et al 1•.
36-32- 4 Kertley, Watchorn O. & G. 1.
35-30- 5 Wray, Rogers Brothers 1•.

Ellis County—
18-13-17w Polifka, J. A. Harvey 1.

Finney County—
33-21-30 Ladd, Garden City Oil 1.

Geary County—
30-12-6e Foster, Marshall et al 1•.

Gove County—
5-11-26w Welsh, Keys Bros. & Marine Pet. 2.

Harper County—
14-33-9w Nettingham, D. P. Fleeger 1.

Harvey County—
4-23- 2 Conway, Mason & Ralston 2.

Kingman County—
34-27-7w Garber, Hayes et al 1•.

Lincoln County—
25-12-10w Dahl, Turman Oil 1.
36-11-10w Koeler, Trees Oil 1.
19-13-9w Jellison, Amerada Pet. 1.
16-11-7w Crawford, Amerada Pet. 1.

Lyon County—
20-20-12 Miller, Tatlock et al 1•.
24-21-11 Matile, National Ref. & Sutter 1.

McPherson County—
26-21- 5w Theison, Ramona O. & G. 1.
21-20-2w Lynch, Krown & Krown 1.

Osborne County—
20-10-11w Dorman, Delhi O & G. 1.
34-10-15w Worley, Liggett et al 1•.

Osage County—
16-18-17e Shade, Smith-Page 1.

Pottawatomie County—
11-10-12 St. Mary's Crawford et al 1•.
4-10-12 Doyle, Crawford & Jennings 1•.

Mitchell County—
10- 9-8w Beener, Alcorn Oil 1.

Reno County—
5-26-4w Unknown, Travis et al 1•.
28-25-6w Unknown, Hayes et al 1.
2-25-6w Mohr, Jennings-Pells & Star 1.
13-23-8w Jones, Rino O. & G. 1.
3-22-6w Sallee, Hipple et al 1.

Rice County—
7-20-6w Bush, Rino Oil 1.
14-20-6w Warnett, Prairie O. & G. 1.
35-20-6w Miller, Prairie O. & G. 1.
35-19-6w Beer, Krown & Krown 1.
15-21-10w Taylor, Turman Oil 1.
21-20- 6w Barnes, Stamey et al 1.

Riley County—
7-20-6w Marks, O'Neil et al 1•.
36- 7- 4 Doyle, Gentles et al 1•.

Rush County—
3-16-16w Wallace, Chas. F. Noble 1.
22-18-15w Kirby, G. T. Green et al 1.

Russell County—
4-13-15w Walbridge, Patton et al 1.
3-13-13w Phillips, Valerius O. & G. 1.
36-15-13w Sellers, Alcorn Oil 1.
24-13-13w Harbaugh, Preston et al 1•.
20-12-15w Milke, S. & S. & J. Findiess 1.
14-12-14w Herberer, Skelly Oil 1.
36-12-13w Fairchild, Valerius Oil et al 1.
11-12-12w Unknown, Skelly Oil et al 1.
8-12-15w Oswald, Derby Oil et al 1.
Oswald, Valerius O. & G. 1.
17-13-15w Munsell, Valerius O. & G. 1.
24-12-15w Haise, Prod. & Ref. 1.
31-21-14w Haise, Lewis Oil 1.
29-11-15w Sutton, Findiess, S. & S. 1.

Sedgwick County—
2-29- 2 Fleming, Higgins et al 1•.
29-29- 2 Hunsacker, Hartman-Skaer et al 1•.
27-27-4w Tuielmeyer, Cole & Neff 1.
34-26- 1 Tjaden, Wichita O. & G. 1•.

Seward County—
34-34-34w Wood, Defender O. & G. 1•.
20-33-33w Seely, Seward Oil 1•.

Stafford County—
23-21-11w Cooper et al 1.

Sumner County—
34-34-1w Johnson, Shawver et al 1•.
3-35-2e Shryock, Prairie O. & G. 1.
29-34-2e Work, Phillips Pet. 1.
8-33-3w Felt, Phillips Pet. 1•.
29-32- 2 Veoil, Phillips Pet. 1.
1-33-1w Raurey, Tidal Oil 1.
29-34-2e Work, Phillips Pet. 1.
27-32-2w Brumwest, Phillips Pet. 1.
12-31-1w Stewart, Phillips Pet. 1.
34-30-1w Conn, Champlin 1.
16-30-1w Hitchcock, Champlin Ref. 1.

Trego County—
16-11-24w Keys Brothers & Marine Pet. 1.
9-11-22w Unknown, Mississippi Valley Oil 1.

Washington County—
9- 5- 5 Unknown, Barnes O. & G. 1•.
Rigs, 25; wells drilling, 130; total, 155.

EAST CENTRAL TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Navarro	22	4,260	3	0	4	66	70
Miscellaneous	5	0	5	0	9	38	47
Total June 27	4,260	13	0	13	104	117	
Total May 55	20,566	18	1	23	96	119	
Difference 28	16,306	5	1	10	8	2	

WELLS COMPLETED
NAVARRO COUNTY

Powell Field—
Easterling, Easter Oil 1 ..... abd
McKie, Roxana Pet. Corp. 9-A 85
Witherspoon, Gulf Prod. 9 ..... abd
McKie, Kirby Pet. 4 850
Woolens, Lambert et al 1 ..... dry
I. N. Cerf, Tidal Oil 11 125
I. N. Cerf, Tidal Oil 12 120
I. T. Kent, The Texas Co. (Mag.) 20..... 50
Gibson, Webster & Pickens 1 ..... abd
Pugh, Humble O. & R. 9 ..... dry
Kent, The Texas Co. 21 100
Harvard, Derby Oil 5 20
Boyd, Davis & Speers 60
J. T. Rose, Simms Oil 13 1500
Woolens, John Hoosier et al 1 ..... abd
Ramsey, Humble O. & R. 23-B 45
Bailey, Andrews Pet. 1 ..... dry
Crews, Tidal Oil 8 320

Richland District—
Webb, Boyd Oil 2 480
A. J. Swink, Gutman et al 1 ..... dry
H. A. Swink, Travis et al 2 25
Webb, Boyd Oil 1 480

Wells completed 22
Production 4260
Dry 8
Gas 0

MISCELLANEOUS

Bowie County—
L. Forte, Hooks O. & G. 2..... abd

Hopkins County—
Harmon, Schriver & Breburne 1 ..... abd
T. W. Hall, G. J. Smith 1 ..... abd
Pippins, E. L. Smith 1 ..... dry

Rains County—
Tallett, Yost et al 1 ..... abd

Wells completed 5
Production 0
Dry 5
Gas 0

NAVARRO COUNTY

Rigs
Roberts, A. Patrick et al 1.
Swink, Atlantic O. P. 1.
Webb, Hallmack Oil 5.
Brown, Sun Co. 7.

Wells Drilling
Tramel, Cranfield & Penn 1.
McGowan, Boyd Oil 1.
Chapman, McMan Oil 8.
McKie, Gulf Prod. 3-A.
McKie, Roxana Pet. 9.
McKie, Roxana Pet. 10-A.
McKie, Pure Oil 64.
McKie, Pure Oil 65.
McKie, Kirby Pet. 5.
Hill, Elliott et al 3, 5.
Alexander, McIntyre et al 1.
Rose, Simms Oil 14.
I. N. Cerf, E. L. Smith Oil 5.
I. T. Kent, The Texas Co. 22.
Williamson, Andrews Pet. 2.
Boyd, Davis & Speers 2.
T. Boyd, G. Kent 1.
Goldman, Neeney & Smith 1.
Keith, Skelly Oil 9.
Bressie, Tidal Oil 4.
Phillips, Tidal Oil 13.
Thornton, Ranger Vindicator 1.
Evans, Brothers Oil 1.
Loggbotham, Snowden & McSweeney 8, 10.
Morris, Trapshooter Reiley 1.
Bounds, Humphreys Oil 8.
Allison, Boyd Oil 1.
Club, Collins et al 1.
Swink, Langley et al 2.
A. N. Brown, Moore & Hamil 1.
A. N. Brown, McDonald et al 3, 4.
C. H. Graves, McDonald et al 1.
S. T. Green, McDonald et al 1.
S. T. Green, R. Smith et al 1.
Webb, Boyd Oil 3, 4, 5, 6, 7.
Allison, Godley Oil 3, 4, 5.
Dr. Brown, Hallmack Oil 1.
Webb, Hallmack Oil 1, 2, 3, 4.
Sheffield, Humble O. & R. 1.
Davis, E. C. Meade et al 1.
H. A. Swink, Miller Lewis 1.
Davis, Rowan et al 1.
Brown, Sun Co. 3, 4, 5, 6.
Davis, Stroube & Stroube 1.
Allison, Simms Oil 1.
Davis, Tuckett et al 1.
Davis, Tuckett et al Fox 1.
Swink, Miller Lewis 1.
Hillburn, G. Moore 1.
Davis, Wallace et al 1.
Davis, Oxford Oil 1.
Rigs, 4; wells drilling, 66; total, 70.

MISCELLANEOUS

Rigs

Cass County—
Speers, Bankers Trust 1.
Caster, Gibbs Petroleum 1.

Anderson County—
Turner, Hughes et al 1.

Hunt County—
Burnett, Kelsey et al 1.

Hopkins County—
Enix, Texas Co. 1.
Brooks, Kelsey et al 1.
McClure, Bar Tex Drg. 1.

Falls County—
Jennings, Inland Oil 1.

Van Zandt County—
Greer, Marland Oil 1.

Wells Drilling and Shut Down

Anderson County—
Parker, Williams et al 1.
Brooks & Auld, Rosser et al 1.
Morning Plant, Palestine O. & G. 1.

Bowie County—
Parker, Baldy Springs Oil 1.
Taylor, Tri State Oil 1.
Rochelle, Delaney O. & G. 1.

Cass County—
Evans, Caldwell et al 1.

Cherokee County—
Collington Drg. Co. 1.

Delta County—
Patrick, McNeill et al 1.

Falls County—
Peacock, High Banks Oil 1.
Pride, Balto Tex Oil 1.
Peters, Grover Edwards 1.
Harlin, Texola Pet. 1.
Clark, Pearce Pet. 1.
Covington, Mayflower Oil 1.
Brown, Edwards et al 1.

Henderson County—
Russell, F. Haynes 1.
Eads, Richardson Bros. 1.

Hopkins County—
Harmon, Schriver, Dreyburn et al 1.
Hall, G. J. Smith 1.
Smith, Cy Borden et al 1.
Pippins, E. L. Smith Oil Co. 1.

Kaufman County—
Kirby, J. P. Germany et al 1.
Barron, Skinner & Lyles 1.

Leon County—
McKinnon, Kechi O. & G. 1.
Baldon, Leon Co. O. D. Co. 1.
Smith, Deep Springs Oil 1.
Carrington, Mexia Marquette Oil 1.

Raines County—
Dowell, McLaughlin & Lyles 1.

Red River County—
Simson, Clarksville Texas Oil 1.
Dinwiddie, Brewer Rines 1.
Arnold, Isabell Gibson 1.
Wortham, O'Bannon Bros. 1.
Garland, Rogging Oil 1.
Antone, Johnron Pet. 1.

Van Zandt County—
Jones, Mexia Drilling 1.
Dunbar, Terrell Oil 1.
Hodges, Brookens & Jenkins 1.
Rigs, 9; wells drilling, 38; total, 47.

NORTH CENTRAL TEXAS

Including June 19, 1924

District—	Comp.	Prod.	Dry	Gas
Wichita	73	5,037	18	0
Burkburnett	15	290	5	0
Eastland	20	670	4	3
Stephens County	13	1,530	1	2
Young	12	280	9	0
Archer County	177	13,110	57	0
Wildcats	29	990	16	3
Total, June	339	21,907	110	8
Total, May	290	27,023	106	3
Difference	49	5,116	4	5

Summary of New Work

District—	Rigs	Drg.	Total
Wichita Wilbarger	22	59	81
Burkburnett	2	19	21
Eastland	7	35	42
Stephens	13	64	77
Young	6	17	23
Archer	36	92	128
Wildcats	23	101	124
Total, June	109	387	496
Total, May	129	426	555
Difference	20	39	59

BURKBURNETT

Wells Completed
Schroeder, Cranfill Bros. 1 ..... dry
Bailey, Hunter and others 1 10
Barwise, Harrold and others 1 ..... dry
Kierst, Norton and others 1 ..... dry
Hirschi, The Sun Co. 26 40
Daniels, Grace Oil Co. 1-B 10
Hirschi, Pigg Oil Co. 25 35
Roller, Robinson Oil Co. 8 10
Hoffler, Baldwin and others 1 ..... dry
Hobson, Callender and others 2 5
Eads, Graffer and others 1 ..... dry
Foster, Pigg and others 3 60
Hirschi, Pigg Oil Co. 26 25
Surrein, Perkins and others 8 15
Donohoe, Couch and others 1 80

Wells completed 15
Production 290
Dry 5

WICHITA AND WILBARGER COUNTIES

Wells Completed
Jennings, Apple and others 3 120
Fisher, Carter and others 3 50
Waggoner, Burcka Production Co. 9 ... 30
Allingham, Hereford Oil Co. 13 30
McCarty, Lanning and others 2 20
Mitchell, Owens and others 2 ..... dry
Nance, Ryan Petroleum Co. 17 60
Waggoner, Rio Bravo Oil Co. 10 25
Burnett, Texhoma Oil & Ref. Co. 3 .. 45
Waggoner, Texhoma Oil & Ref. Co. 31 15
McCarty, United Central Oil Corp. 3.. 125
Overby Hill and others 4 40
Overby, Maar and others 1 ..... dry
Piper, Magnolia Petroleum Co. 44..... 17
Waggoner, Waggoner, Matlock et al 1 .. dry
Douglass, Camp Oil & Gas Co. 9-B..... 45
Seay, Cowling and others 4 ..... dry
Fee, Fisher and others 1 ..... dry
Waggoner, Gulf Production Co. 5-C... 5
Douglass, Humble Oil & Ref. Co. 15-A 150
McCarty, Lanning and others 3 15
Waggoner, Magnolia Petroleum Co. 7-B 40
Burnett, Perkins and others 7 45
Nance, Ryan Petroleum Co. 15 340
Burnett, Texhoma Oil & Ref. Co. 3-B.. dry
Waggoner, Texhoma Oil & Ref. Co., 2-J 20
Smythe, Underwood Dlg. Co., 1 ..... dry
McCarty, United Central Oil Corp. 2.. 400
Peeler, Scott Bower 2 30
Peeler, Scott Bower 3 50
Murray, Electra Gulf Oil Co. 1..... 100
Watkins, Harvey and others 3 115
Ferguson, Kimmell and others..... dry
Allen, Kruger and others 3 50
Allen, Moore and others 1 200
Jackson, Panhandle Refining Co. 3 .. 800
Newton, Petroleum Products Co. 1 100
Allen, Strause and others 4 10
Allen, Strause and others 5 20
Waggoner, Baldwin Brothers 1 ..... dry
Waggoner, Black Cat Oil Co. 8 ..... dry
Waggoner, Culberson and others 24..... 75
Douglass, Drillers Dev. Co. 3 25
Fee, Fisher and others 2 ..... dry
Waggoner, Magnolia Petroleum Co. 1-A 15
Burnett, Magnolia Petroleum Co. 9-B.. 25
Nance, Ryan Petroleum Co. 18 40
Seay, Scott and others 1 60
McCarty, United Central Oil Corp. 4.. 10
McCarty, United Central Oil Corp. 5.. 75
Peeler, Scott Bower 4 60
Overby, Hill and others 5 60
Ferguson, Kimmell and others 60
Laudenslager, Lucky Hill O. & G. Co. 1 dry
Allen, Petroleum Produts Co. 1 70
Newton, Underwood Dlg. Co. 2 70
Waggoner, Dyson Syndicate 6 520
Smith, Texas Pacific Coal & Oil Co. 1.. dry
Pierce, Empire Gas & Fuel Co. 2 40
Pierce, Empire Gas & Fuel Co. 3 35
Waggoner, Flowers and others 2 40
Jennings, Gulf Production Co. 8 25
Waggoner, Magnolia Petroleum Co. 34-A 95
Nance, Ryan Petroleum Co. 19 100
Maer, Church and others..... 1175
Murray, Electra Gulf Co. 2 75
Watkins, Electra Gulf Co. 3 ..... dry
Allen, Gulf Production Co. 1 ..... dry
Overby, Hill and others 6 ..... dry
Allen, Kruger and others 4 55
Overby, Wilson and others 2 160
Waggoner, Magnolia Petroleum Co. 63.. 90

Wells completed 73
Production 5037
Dry 13

ARCHER COUNTY

Wells Completed
Ambercrombie, The Texas Co. 3 175
Hardegree, The Texas Co. 1 ..... dry
Key, The Texas Co. 1 5
Orton, The Texas Co. 1 40
Wilson, Atlantic Oil & Ref. Co. 2 125
Block, Bain and others 1 ..... dry
Wilson, Camp Oil & Gas Co. 15 100
Wilson, Camp Oil & Gas Co., 1-B..... 100
Wilson, Chenault and others 5 ..... dry
Farmer, Comac Oil Co. 1 ..... dry
Wilson, Donohoe and others 1 250
Wilson, Empire Gas & Fuel Co. 9..... 18
Wilson, Empire Gas & Fuel Co. 10-C.. 150
Wilson, Erwin and others 1 ..... dry
Wilson, Featherstone and others 6..... 100
Parrish, Franklin and others 2 276
Nichols, Gulf Production Co. 1 ..... dry
Carter, Gwynn and others 14 50
Carter, Gwynn and others 15 ..... dry
Wilson, Gwynn and others 2 140
Wilson, Gwynn and others 8-B 50
Kempner, Langford and others 7 10
Miller, Litchfield and others 3 40
Wilson, McCarty Oil Co. 280
Wilson, Moore and others 1 ..... dry
White, Murchison and others 1 237
Wilson, Nance and others 2 185
Thompson, Oil Investment Co. 2 ..... dry
Coleman, Orth and others 1 ..... dry
Wilson, Parks and others 2 160
White, Sebersky and others 2 85
Richardson, Shamrock Oil Co. 5 100
Richardson, Shamrock Oil Co. 6 125
Jackson, Shappell and others 9 18
Wilson, Sixty-Six Oil Co. 2 100
Hull, Strong and others 1 ..... dry
Wilson, Verschoyle and others 5 150
Wilson, Verschoyle and others 6..... 100
Wilson, Wichtex Prod. & Dev. Co. 1.... 175
Wilson, Bridwell & Heydrick 1-G..... dry
Wilson, Bridwell & Heydrick 4-F 130
Taber, Burns and others 1 ..... dry
Parrish, Carter and others 2 ..... dry
Parish, Carter and others 1 ..... dry
Wilson, Carey Drilling Co. 1 150
Richardson, Chenault and others 7..... dry
Parrish, Cos and others 1 ..... dry
Wilson, Empire Gas & Fuel Co. 1-D.... 25
Boone, Evangeline Production Co. 1 .... dry
Ferguson, F. & H. Syndicate 16-A..... 45
Wilson, Flowers Brothers 1 ..... dry
Wilson, Graham and others 3-B 450
Nichols, Gulf Production Co. 2 130
Blewett, Herbert O. Co. 1 ..... dry
Campbell, Hoyle and others 1 ..... dry
Wilson, Kentucky Oil Corp. 3-A 150
Ragle, Knight and others 1 ..... dry
Turbeville, Major Oil Co. 2 40
Knezek, Mitcham and others 1 ..... dry
Coody, Murchison and others 1 ..... dry
Wilson, Murchison and others 7 210
Wilson, Pace and others 7 30
Ferguson, Panhandle O. & R. Co. 7..... 125
Wilson, Prairie Oil & Gas Co. 2-E 125
Wilson, Prairie Oil & Gas Co. 3 225
Wilson, Prairie Oil & Gas Co. 4 165
Wilson, Ramming and others 4 165
McClure, Richardson and others 1 ..... dry
Wilson, Riner and Bailey 5 200
Wilson, Riner and Bailey 7 400
Richardson, Shamrock Oil Co. 6-B 240
Jackson, Shappell and others 12 20
Ferguson, Simms Oil Corp. 4-B ..... dry
Wilson, Stone and others 1 ..... dry
Ambercrombie, Sun Oil Co. 1 140
Richardson, Swastika Oil Co 5-C..... dry
Carter, Texhoma Oil & Refining Co. 12 20
Wilson, Texhoma Oil & Refining Co. 12-C 80
Wilson, Texhoma Oil & Refining Co. 13 dry
Carter, Tucker and others, 2 10
Wilson, Wichtex Prod. & Dev. Co. 2 40
Wilmot, Wilmot Farm Oil Co. 5 150
Wilson, Woods and others 12 10
Wilson, Woods and others 15 20
Wilson, Woodburn Oil Corp. 1-B..... 300
Ambercrombie, The Texas Co. 1 ..... dry
Ambercrombie, The Texas Co. 2 ..... dry
Kirkland, The Texas Co. 1 ..... dry
Ward, American Refining Co. 1 ..... dry
Haley, Andrade and others 1 ..... dry
Parrish, Atlantic Oil Co. 2 350
Wilson, Atlantic Oil Co. 3 250
Wilson, Atlantic Oil Co. 4 250
Parrish, Buie Production Co. 1 ..... dry
Wilson, Camp Oil & Gas Co. 16 ..... dry
Wilson, Chenault and others 2-F ..... dry
Wilson, Chenault and others 3-F 15
Richardson, Clark and others 6 75
Rutty, Commercial Prod. Co. 1 40
Reilly, County Line Oil Corp. 1 ..... dry
Key, Douglass and others 1 ..... dry
Richardson, Eagler Creek Oil Co. 3 15
Parrish, Franklin and others 1 ..... dry
Parrish, Franklin and others 3..... 90
Mrs. Carter, Hawkins and others 3... 100
Thompson, Jetter and others 1 ..... dry
Wilson, Jones Oil Co. 8 140
Porter, Jones and others 1 ..... dry
Wilson, Kentucky Oil Corp. 6 20
Wilson, Kentucky Oil Corp. 7 ..... dry
Bell, Kimmell and others 1 ..... dry
Coffield, Magnolia Petroleum Co. 1 50
Coffield, Magnolia Petroleum Co. 2 60

Richardson, Murchison and others 1... 100
White, Murchison and others 1-B..... 180
Wilson(Oil Investment Co. 1 ..... dry
Wilson, Prairie Oil & Gas Co. 5-E.... 350
Wilson, Prairie Oil & Gas Co. 7-E 60
Wilson, Richardson and others 1 ..... dry
Wilson, Rodgers and others 1 ..... dry
Carter, Scott and others 2 10
Campbell, Shamrock Oil Co. 1 75
Jackson, Shappell and others, 11 350
K. & K., Staley and others 3 150
Bolldworth, Suggett and others 1 ..... dry
Parrish, Sunshine State O. & R. Co. 9 15
Wilson, Texhoma Oil & Ref. Co. 1-B... 155
Woodrum, Thomas and others 1 ..... dry
Wilson, Woods and others 14 10
Bell, Archer Bell Petroleum Co. 1 ..... dry
Robertson, Archer Oil Corp. 1 420
Wilson, Atlantic Oil Co. 5 60
Wilson, Atlantic Oil Co. 6 ..... dry
Wilson, Atlantic Oil Co. 7 120
Wilson, Bridwell & Heydrick 6-F..... 90
Wilson, Burns and others 1-B ..... dry
Jackson, Burton and others 1 ..... dry
Wilson, Carey Dig. Co. 2 20
Miller, Clark and others 4 60
Jones, Cumley and others 1 ..... dry
Perkins, Daniels and others 1 ..... dry
Helm, Dee Brothers 1 ..... dry
Wilson, Donohoe and others 2 200
Wilson, Donohoe and others 3 250
Wilson, Empire Gas & Fuel Co. 11-C.. 200
Wilson, Empire Gas & Fuel Co., 14-C.. 45
Wilson, Empire Gas & Fuel Co. 15-C... 65
Wilson, Graham and others, 4-B 25
Ambercrombie, Green and others 2 ... 100
Wilson, Gholke and others 1 ..... dry
Wilson, Griswold Oil Co. 1-D 30
Wilson, Griswold Oil Co. 3-F ..... dry
Key, Gulf Production Co. 1 ..... dry
Wilson, Gwynn and others 3 10
Wilson, Holmes and others 1 ..... dry
White, Humphrey and others 1 100
Kempner, Langford and others 10 ..... dry
Robertson, Magnolia Petroleum Co. 1... 60
Wilson, Massey and others 1 ..... dry
Schildnickt, McCarty Oil Co. 1 ..... dry
Farmer, McKenzie and others 1 ..... dry
Wilson, Murchison and others 8 150
Wilson, Prairie Oil & Gas Co. 6 20
Wilson, Riner and Bailey 10 100
Threat, Rubson and others, 1 ..... dry
Jackson, Shappell and others 13 250
Harmonson, Smith and others 1 ..... dry
Crawford, Smith and others 2 ..... dry
Wilson, Staley and others 5-C 85
Ambercrombie, Sun Oil Co. 2 ..... dry
Gose, Texhoma Oil & Ref. Co. 45 10
Wilson, Texhoma Oil & Ref. Co. 2-D ... 120
Kempner, Texhoma Oil & Ref. Co. 3 ... 45
Wilson, White Oil Corp. 1 25
Wilson, Woodburn Oil Corp. 4-B 175
Wilson, Woodburn Oil Corp. 5 190
Wilson, Woodburn Oil Corp. 1 ..... dry

Wells completed 177
Production 13110
Dry 57

STEPHENS COUNTY
Wells Completed

Gardenshire, Texas Pacific C. & O. Co. 4 gas
Williams, Moore and others 1 50
Jones, Humble Oil & Refining Co. 7 ... 200
Head, Mook Texas Oil Co. 1 25
Gholson, The Texas Co. 14 20
Stribling, H. R. W. Oil Co. 1 ..... dry
Rogers, Texas Pacific C. & O. Co. 3.. 100
Warren, Lone Star Gas Co. 20 10
Thompson, Oakwood Dig. Co. 1 ..... gas
Parks, The Texas Co. 32-A 25
Knox, Republic Prod. Co. 5 500
Langford, Carter and others 1 350
Williams, Thompson and others 3 250

Wells completed 13
Production 1520
Dry 1
Gas 2
Gas production 14,000,000

EASTLAND COUNTY
Wells Completed

Lyerla, Page and others 1 ..... gas
Hightower, Panhandle Oil & Ref. Co. 17 75
Harwood, Turner and others 1 10
Hains Ablon and others 1 ..... gas
Poe, Andrade and others 1 ..... dry
Breisford, Dorothy Oil Co. 2 ..... dry
Shugart, Gholson and others 4 40
Neal, Shannon and others 3 15
Wheeler, Donnelly Brothers 2 150
Graham, Gallagher and others 1 ..... dry
Fox, Williamson and others 1 65
Hatten, Burkett and others 1 75
Connellee, Dixie Oil Co. 75
Isenhour, McBride and others 2 ..... gas
Cathey, Sherrin and others 2 80
Cathey, Tidal Oil Co. 1 40
Shugart, Gholson and others 6 20
Anderson, Mid-Kansas Oil & Gas Co. 5 20
Hightower, Panhandle Oil & Ref. Co. 18 dry
Neal, Shannon and others 5 5

Wells completed 20
Production 670
Dry 4
Gas 3
Gas production 23,250,000

YOUNG COUNTY
Wells Completed

Marshall, Bashara and others 1 35
Vernon, Creighton and others 1 ..... dry
River Bed, Hinson and others 1 ..... dry
Gibson, Mid-Kansas Oil & Gas Co. 1... 200
Costello, Mutual Oil Co. 1 ..... dry
Kemp, Peter Oil Co. 7 ..... dry
Brenzer, Snider and others 1 ..... dry
Hinson, Calmo Oil Co. 1 ..... dry
Andrews, Miller and others 1 ..... dry
Kemp, Peter Oil Co. 6 ..... dry
Benson, Russell and others 1 45
Gilmore, Dyer and others 1 ..... dry

Wells completed 12
Production 280
Dry 9

WILDCATS
Wells Completed

Shackelford County—
Poindexter, Landreth Oil Co. 1-B..... 20
Palo Pinto County—
McGee, Gultz and others 1 ..... dry
Fee, Upham Gas Co. 1 ..... dry
Robinson, Texas Pacific C. & O. Co. 10 80
Stuart, Texas Pacific C. & O. Co. 147.. 10
Robinson, Texhoma Oil & Ref. Co. 2 ... dry
Watson, Upham Gas Co. 4 15
Weldon, Haines and others 1 ..... dry
Mitchell County—
Foster, Colorado Tex. Pet. Co. 2..... dry
Smart, Sloan and others 3 125
Coleman County—
Gates, Tidal Oil Co., 1 ..... dry
Brown County—
Byrd, Brooks and others 1 ..... dry
McDonough, Canyon Oil & Gas Co. 3 ... 10
Carson County—
Burnett, Gulf Production Co. 3-A 90
Burnett, Gulf Production Co. 4 ..... dry
Taylor County—
Porter, Wurtz and others 1 ..... dry
Clay County—
Martin, Lone Star Gas Co. 4 ..... gas
Withers, Lone Star Gas Co. 3 ..... dry
Panhandle, Lone Star Gas Co. 9 ..... gas
Montague County—
Maddox, Humphreys Oil Co. 3 ..... dry
Wilson, Lesh and others 1 ..... dry
Hemphill County—
Hopkins, Piney Oil Co. 1 ..... dry
Glasscock County—
McDowell, The General Oil Co. 4..... dry
Hutchinson County—
Johnson, Humphreys Oil Co. 1 ..... gas
Callahan County—
Ackers, Moore and others 5 430
Ablon, Poe and Wilson 5 150
Cathey, Tidal Oil Co. 2 75
Throckmorton County—
Chandler, Whitney and others 1 ..... dry
Hardeman County—
Winbury, Frizell Oil Co. 1 ..... dry

Wells completed 29
Production 990
Dry 16
Gas 3
Gas production 9,500,000

BURKBURNETT—Hirschi
Rigs

Potter, McDabb Oil Co. 3.
Sheldon, Sheldon and others 4.
Wells Drilling
Roller. Ascott and others 1.
Foster, Burk Cameron Oil Co. 10.
Ward & Todd, Clark and others 7-A.
Roberts, Constantine Refining Co. 1.
Donohoe, Couch and others 2.
Daniels, Grace Oil Co. 2, 3.
Martin, Gulf Production Co. 2.
Ruyle, Harvey Oil Co. 20.
Roller, Hanks and others 1.
Musgrave, Hunter and others 1.
Bailey, Hunter and others 2.
Langford, Langford and others 9, 10.
Fowler, McClure and others 1.
Treece, Magnolia Petroleum Co. 6.
Beach, Magnolia Petroleum Co. 6.
Dodson, Magnolia Petroleum Co. 13.
Roller, Oil Investment Co. 1.
Case, Richardson and others 1.
Rigs, 2; wells drilling 19; total, 21..

WICHITA AND WILBARGER
Rigs

Fisher, Baldwin and others 1.
Douglass, Buffalo Texas Oil Co. 5-B.
Waggoner, Eureka Production Co. 11.
Fassett, Ferguson and others 1.
Burnett, Gulf Production Co. 22-A.
Allingham, Herford Oil Co. 12.
Fisher, Myers and others 1.
Waggoner, Magnolia Petroleum Co. 37-A.
Nance, Ryan, Petroleum Co. 20, 21.
Burnett, Texhoma Oil & Ref. Co. 4-C, 2-B.
Nance, United Central Oil Corp. 7.
Hodges, Carter and others 1.
Murray, Electra Gulf Oil Co. 4, 5.
Overby, Hill and others 7.
Allen, Kruger and others 5.
Allen, Petroleum Products Co., 3-A, 4-A.
Maer, Petroleum Products Co. 3.
Maer, Underwood Drilling Co. 3.
Murray, United Central Oil Corp. 1.
Wells Drilling
Skinner, The Texas Co. 43.
Waggoner, The Texas Co. 294, 295.
Wigley, Adams and others 1.
Jennings, Apple and others 1-B, 4.
Fassett, Bowen and others 1-B.
Burnett, Burkland and others 1.
Douglas, Camp Oil & Gas Co. 10-B.
Fisher, Carter and others 4.
Jeff Waggoner, Culberson and others 25.
Jennings, Douglas and others 3-A.
Fisher, Evans and others 1.
Jennings, Gulf Production Co. 10.
Miller, Gulf Production Co. 61.
Jeff Waggoner, Humble Oil & Ref. Co. 1-C.
Douglass, Humble Oil & Ref. Co. 16-A.
Burnett, Humble Oil & Ref. Co. 2-B.
McCarty, Lanning and others 4.
Waggoner, Magnolia Petroleum Co. 36-A.
Pere Waggoner, Magnolia Petroleum Co. 2.
Waggoner, Magnolia Pet. Co. 8-E, 3-C.
Burnett, Maer and others 1, 2.
McCarty, Panhandle Oil & Refining Co. 4.
Burnett, John O'Neil 1, 2.
Waggoner, Rio Bravo Oil Co. 7-E.
Burnett, Stacy and others 1-B.
Burnett, Texhoma Oil & Refining Co. 5-A.
McCarty, Underwood Drilling Co. 2, 3.
Fouch, United Production Co. 3.
Jennings, United Production Co. 4.
Nance, United Central Oil Corp. 1, 6.
Fassett, Dr. Wallace 1, 2.
Munger, Art and others 1.
Allen, Cline Oil Co. 1.
Mrs. Murray, Electra Gulf Oil Co. 2.
Avis, Gherke and others 1.
Peeler, Harvey and others 1.
Allen, Humble Oil & Refining Co. 1.
Hoge, Jones and others 1.
Allen, K. M. A. Oil Co. 1.
Allen, Moore and others 2, 3.
Love, Parker Brothers 1.
Allen, Petroleum Prod. Co., 1-A, 2-A.
Maer, Petroleum Prod. Co., 2.
Waggoner, Rook and others 5.
Dill, Church and others 1.
Sumner, Magnolia Petroleum Co. 45.
Davis, Pigg and others 1.
Richardson, South Vernon Oil Co. 1.
Hortoin, Thelma Wells 1.
Rigs, 22; wells drilling 59; total, 81.

ARCHER COUNTY
Rigs

Turbeville, Andrade and others 1.
Coffield, Burns and others 1.
Wilson, Chenault and others 4-F.
Heron, Choate and others 1.
Miller, Clark and others 5.
Hawkins, Creath and others 1.
Ferguson, Darr and others 2.
Parrish, Franklin and others 8, 9.
Wilson, Graham and others 5-B.
Seigler, Gulf Production Co. 2.
Turbeville, Hart and others 1.
Wilson, Humble Oil & Refining Co. 2, 3
White, Humphrey and others 2.
Marwitz, Lanning and others 1.
Harbison, Lowry and others 1. .
Wilson, McCarty Oil Co. 3-B.
Parrish, Murchison and others 1.
Rutty, Murchison and others 1.
White, Murchison and others 3-B.
Wilson, Murchison and others 1.
Wilson, Oil Investment Co. 1.
White, Pace and others 1.
Ford, Phillips and others 1.
Wilson, Phillips and others 1.
Parrish, Prairie Oil & Gas Co. 7.
Wilson, Prairie Oil & Gas Co. 18.
Boone, Richardson and others 1.
Crawford, Stewart and others 1.
Key, Sunshine State O. & R. Co. 1.
Riley, Sunshine State O. & R. Co. 1.
Wilson, United Drilling Co. 1.
Falls, School land, Vance and others 1.
Wilson, Wharton and others 1.
Wilson, Woods and others 6.
Wells Drilling
Ambercrombie, The Texas Co. 1.
Graham, The Texas Co. 1.
Key, The Texas Co. 1.
Coffield, Andrade and others 1.
Robertson, Archer Oil Corp. 2.
Wilson, Atlantic Oil Co., 1-A, 2-A, 5 A.
White, Baldwin and others 1.
Farmer, Brader and others 1.
Wilson, Bridwell and others 2.
Lyles, Carter and others 1.
Mask, Cato and others 1.
Andrews, Chambers and others 1-B.
Richardson, Chenault and others 8.
Turbeville, Clark and others 1.
White, Comet Petroleum Co. 1, 2.
Crawford, Corlett and others 1.
Parkey, Crump and others 1.
Ferguson, Darf and others 1.
White, Day and others 3.
White, Donovan and others, 2, 3.
Herron, Duke and others 1.
Wilson, Empire G. & F. Co. 16-C, 17-C, 18-C.
White, Faucett and others.
Parrish, Franklin and others 4, 5, 7.
Wilson, Griswold Oil Co. 4-F, 5-F.
Nichols, Gulf Production Co. 3, 4.
Siegler, Gulf Production Co. 1.
Carter, Hawkins and others 5.
K. & K., Hill and others 1.
Wright, Hobbs and others 1.
Wilson, Holmes and others 1.
Wilson, Humble Oil & Refining Co. 1.
Parrish, Jeffries and others 1.
Miller, Johnson and others 1.
Wilson, Jones Oil Co. 9.
Wilson, Jones Oil Co. 1.
Wilson Kentucky Oil Corp. 15, 1.
Porter, Kinney and others 1.
Ragle, Knight and others 2.
Miller, Litchfield and others 4.
Curry, Maer and others 1.
Coffield, Magnolia Petroleum Co. 3.
Turbeville, Major Oil Co. 3.
Wilson, McCarty Oil Co. 2-B.
Wilson, Miller Brothers 1.
Wilson, Moore and others 2.
Brown, Murchison and others 1.
Coody, Murchison and others 2.
Richardson, Murchison and others 2.
White, Murchison and others 2, 2-B.
Kotz, Nance Oil Co. 1.
White, Pace and others 1-B, 1.
Orton, Panhandle Oil & Refining Co. 1.
Robertson, Petroleum Prod. Co. 1.
Chancellor, Phillips and others 1.
Wilson, Prairie Oil & Gas Co. 7-A.
Nichols, R. & F. Oil Co. 1.
Wilson, Riner and Bailey 6, 8, 9.
Farmer, Scott and others 1.
Campbell, Shamrock Oil Co. 2, 3, 4.
Ward, Sheldon and others 1.
Albright, Sheppard and others 1.
Nichols, Simms Oil Corp. 1.
Turbeville, Southwestern Oil Co. 1.
Wilson, Staley and others 6-C.
Wilson, Stock and others 1.
Hazelwood, Strong and others 1.
Farmer Sun Oil Co. 5.
Carter, Tucker and others 3.
Wilson, Verschoyle and others 7-B.
Wilson, White Oil Corp. 2.
Wilson, Woodburn O. Corp. 2-B, 3-B, 6-B, 7-B.
Long, Young Brothers 1.
Rigs, 36; wells drilling, 92; total, 128.

YOUNG COUNTY
Rigs

Graham, Bashara and others 1.
Eagan, Eagle Creek Oil Co. 1.
Price, Hubbard Drilling Co. 1.
Graham, Humble Oil & Refining Co. 1.
Scarborough, McGarr and others 1.
Graham, Reed and others 1.
Wells Drilling
Zimmerman, Applegate and others 1.
Rubinkoenig, Carter and others 1.
Mahoney, Foster and others 1.
McMillan, Hinson and others 1.
Bullock, Holcomb and others 1.
Stowe, Ingle Brothers 1.
Bashara, Keener Oil Co. 1.
Johnson, McGarr and others 1.
Hume, Miller and others 1.
Driver, Mutual Oil Co. 1.
Benson, Nine Hundred Oil Co. 2.
Simms, Peter Oil Co. 1.
Buster, Rieley and others 1.
Hughes, Seaboard Oil & Gas Co. 5.
Benson, Smith and others 1-A.
States Oil Corp, States Oil Corp. 1.
Keithley, Union Oil Co. 1.
Rigs, 6; wells drilling 17: total, 23.

EASTLAND COUNTY
Rigs

Langford, Carter and others 4.
Hague, El Dorado Oil Co. 1.
Edison, Magnolia Petroleum Co. 4.
Gailey, McLester and others 1.
Fox, Williamson and others 2.
McDonald, Grisham and others 1.
Stroul, Sly and others 1.
Wells Drilling
Dawson, Adams and others 1.
Wright, Barkley and others 5.
Foster, Buffington and others 1.
Waggoner, Dixie Oil Co. 1.
Fox, Ellison and others 1.
Ross, Flaherty and others 1.
Sneed, Humble Oil & Refining Co. 1.
Young, Kirk and Brewer 1.
Simmons, Knox-Lewis 1.
Edison, Magnolia Petroleum Co. 2.
Westmoreland, Magnolia Petroleum Co. 16.
Hunt, McLester and others 1.
Harrell, Mid-Kansas Oil & Gas Co. 6.
Casey, Mook Oil Co. 1.
Hightower, Panhandle Oil & Refining Co. 19.
Ainsworth, Parsons and others 1.
Hague, Pardee and others 1.
Sneed, Republic Production Co. 1.
Lyerla, Root and others 1.
Edmundson, Spinney and others 1.
Scott, Teatsorth and others 1.
Huestis, Beeler and others 1.
Amis, Bobo and others 1.
Hatton, Burkett and others 1.
Sneed, Continental Oil Co. 1.
Amis, Clayton and others 1.
Johnson, Dougherty and others 1.
Stubblefield, Donnelly Drilling Co. 1.
Harris, Lowe and others 4.
Burnett, Rosenfield and others 1.
Hise, States Oil Corp. 4.
Ramsey, Texas Co. 1.
Rushing, Texas Development Co. 1.
Stubblefield, Thornton Oil Co. 1.
Jones, Turner and others 3.
Rigs, 7; wells drilling, 35; total 42.

STEPHENS COUNTY
Rigs

Corbett, Cox Consolidated Oil Co. 2.
Martin, Cox Consolidated Oil Co. 6.
Cobb, Critten and others 6, 7.
Lowe, Mid-Kansas Oil & Gas Co. 3, 4.
Sweeney, Rochell and others 3-A.
Rogers, Texas Pacific Coal & Oil Co. 7.
Cobb, Weekly Petroleum Co. 1.
Dodd, Haile and others 1.
Williams, Pearson and others 2.
Jones, Republic Production Co. 4.
Henderson, Scott and others 1.
Wells Drilling
Hudspeth, Brown and others 1.
Cobb, Critten and others 3, 5.
Cunningham, Critten and others 2, 3.
Williams, Curry Pool Oil Co. 1.
Martin, Ivan Petroleum Co. 2.
Brown, Killian and others 2.
Brown, Liner and others 2.
Hudspeth, Marshbanks and others 1.
Hill, Mid-Kansas Oil Gas Co. 5, 12, 13, 14.
Lee, Mid-Kansas Oil & Gas Co. 2.
Lowe, Mid-Kansas Oil & Gas Co., 2, 3.
Richardson, Mid-Kansas Oil & Gas Co. 3.
Crudington, Pierce and others 1.
Atkins, Prairie Oil & Gas Co. 15.
Caldwell, Prairie Oil & Gas Co. 1.
Hamil, Raney and others 1.
Echols, Rochelle and others 1.
Sweeney, Rochelle and others 2-A, 3-A.
Martin, Texas Consolidated Oil Co. 2.
Rogers, Texas Pacific Coal & Oil Co. 5, 6.
W. & C., Walker and Caldwell 10.
Walker, Walker and others 1, 2.
Brown, Brown and others 4.
McClenney, Brown and others 1.
Wallace, Empire Gas & Fuel Co. 7.
Gardner, Foster and others 2.
Jones, Haile and others 5.
Jones, Humble Oil & Refining Co. 2.
Stoker, Lewis and others 2.
Brown, Magnolia Petroleum Co. 2, 5, 9.
Gardner, Magnolia Petroleum Co. 1, 2.
Stoker, Magnolia Petroleum Co. 7.
Bruce, Mahlstedt and Mook Oil Co. 3.
Henderson, Montreal Oil Co. 4.
Stoker, Pitzer and others 1.
Stoker, Prairie Oil & Gas Co. 1.
Veale, Prairie Oil & Gas Co. 8-C.
Harmon, Quakins Petroleum Co. 9.
Davis, Scott and others, 1.
Henderson, Sinclair and others 9.
Jones, Snowden and McSweeney 1, 11.
Sikes, States Oil Corp. 1.
Williams, States Oil Corp 1.
Boone, Sun Oil Co. 2.
Carey, Sun Oil Co. 9-A.
Houston, Swensondale Oil Co. 1.
Heathley, The Texas Co., 8.
Heathley, The Texas Co. 9, 10.
Parks, The Texas Co., 29-A, 40-A.
Rigs, 13; wells drilling, 64; total, 77.

WILDCATS
Baylor County—Rigs—
Wallace, Batchelder and others 1.
Wells Drilling
Coffee, Crittendon and others 1.
Robertson, Independent Oil Co. 1.
Mills, Magnolia Petroleum Co. 1.
Parker, Staley and others 1.
Wallace, Sunshine State Oil & Ref. Co. 1.
Clay County—Wells Drilling—
Stine, Cumley and others 1.
Bullington, D'Yarmett and others 1.
Godfrey, Dixon Oil Co. 1.
Boddy, Gulf Production Co. 1-A.
Worsham, Gulf Production Co. 4.
Myers, Nebraska Oil & Gas Co. 1.
Cooke County—Wells Drilling—
Davis, Big Indian Oil Co. 1.
Jones, Red River Drilling Co. 1.
Foard County—Wells Drilling—
Halcell, Landreth Prod. Co. 1.
Montague County—Wells Drilling—
Salmon, Boyd Oil Co. 1.
Throckmorton County—Rigs—
McKnight, Shamrock Oil Co. 1.
Wells Drilling
School land, Ashcroft and others 1.
Lee, Hale Tex Oil Co. 1.
Elliott, Hale Tex Oil Co. 1.
Broiles, King and others 1.
Conger, Larkin and others 1.
Parrott, Whatley and others 1.
Portwood, Maer and others 1.
Reynolds, Young and others 1.
Carson County—Rigs—
Burnett, Danciger Oil Co. 1.
Wells Drilling
Burnett, The Texas Co. 3, 4.
Mary Burnett, The Texas Co. 2.
Burnett, American Ref. Co. 1, 2.
Armstrong, Culberson Brothers 1.
Burnett, Greenwood and others 1.
Burnett, Silk and others 3.
Childress County—
Wells Drilling
Givens, Anderson and others 1.
Cottle County—
Wells Drilling
Dulaney, Wooley and others 1.
Garza County—

Wells Drilling
Boren, Blackwell and others 5.
Gray County—
Rigs
Wilson, Wilcox Oil Co. 1.
Wells Drilling
Saunders, The Texas Co. 1.
Morris, Holmes and others 1.
Worley, Wilcox Oil Co. 1.
Hutchinson County—
Rigs
Cockrell, Gulf Prod. Co. 1.
Whittenburg, Gulf Prod. Co. 1.
Deahl, Prairie O. & G. Co. 1.
Johnson, Tex-O Oil Co. 1.
Wells Drilling
Johnson, Barnam et al 1.
Smith Capers, McGee and others 1.
Weatherley, Plains O. Co. 1.
Smith Capers, Western Enterprise O. Co. 1.
Whittenburg, Wilson and others 1.
Moore County—
Wells Drilling
Masterson, Producers & Refiners O. Co. 1.
Potter County—
Wells Drilling
Bivens, Producers & Refiners O. Co. 1-A, 2-A.
Roberts County—
Rigs
Ledrick, Big Bend Oil Co. 1.
Wheeler County—
Wells Drilling
Ember, Mid-Continent Oil Syndicate 1.
Sheldon, Tyrrell and others 1.
Williams, Whittington and others 1.
Bowers, Woodley and others 1.
Shackelford County—
Rigs
Lynch, Landreth Oil Co. 3.
Poindexter, Landreth Oil Co. 13, 15.
Wells Drilling
Miles, Humble O. & R. Co. 1.
Sedwick, Kellogg and others 1.
Jackson, Landreth Oil Co. 1.
Boyett, Miller and others 2.
Palo Pinto County—
Wells Drilling
Holly, Cunningham and others 1.
Thornton, Tolbert and others 1.
Boles, Moore & Snebold 2.
Dalton, Pat Dalton 1.
Robinson, Republic Oil Co. 1.
Fee, Strawn Coal Co. 1.
Robinson, Texas Pacific C. & O. Co. 1.
Stewart, Texas & Pacific C. & O. Co. 146.
Erath County—
Wells Drilling
Martin, Marshall and others 1.
Callahan County—
Rigs
Carter, Dutton and others 1.
Cathey, Dutton and others 5, 6.
Finley, Hickey and others 2.
Cathey, Tidal Oil Co. 4.
Wells Drilling
Cathey, Dutton and others. 4, 7.
Snider, Kellogg and others 1.
Isenhower, McCree and others 6.
Bryson, Poe & Wilson 3.
Kile, Root and others 1.
Isenhower, Seaboard O. & G. Co. 3-B, 4-B
Cathey, Sherrin and others 3.
Cathey, Tidal Oil Co. 3.
Coleman County—
Wells Drilling
Overall, Roth and others 8.
Johnson, Slick et al 1.
Brown County—
Rigs
Cox, Avery et al 3.
Brown County—
Wells Drilling
Wheeler, Anderson and others 1.
Williams, Brownwood Pet. Co. 9.
Newton, Canyon O. & G. Co. 2.
Pickett, Cullman et al 1.
Windham, Infield Pet. Co. 5.
Bohara, Maher Bros. 1.
Newlin, Mahlstedt & Mook O. Co. 1.
Newlin, Mendenthall et al 1.
Wright, Stone et al 1.
Comanche County—
Wells Drilling
Moorman, Ghormley et al 1.
Sloan, Kirk & Brewer 1.
Mitchell County—
Rigs
Morrison, the California Co. 9, 10, 11.
Kynard, Daniel et al 1.
Gist, Eddlemen et al 1.
Wells Drilling
Butler, The California Co. 1.
Morrison, The California Co. 8.
Miller, The California Co. 3, 4.
Smart, Sloan et al 4, 5.
Handley, Tidal O. Co. 1.
Reagan County—
Wells Drilling
University Land, Big Lake Oil Co. 9, 10, 11.
Sawyer, Dunning et al 1.
Macintosh, Mid-Kansas O. & G. Co. 1.
Rogers, Texas-Pacific C. & O. Co. 1.
University, Texon O. & L. Co. 1, 2.
Rigs, 23; wells drilling, 101; total, 134.

GULF COAST

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	8	90	1	0	1	3	4
Blue Ridge	1	700	0	0	0	2	2
Big Creek	1	1,000	0	0	2	4	6
Barber Hill	0	0	0	0	2	0	2
Damon Mound	2	0	2	0	0	3	3
Edgerly (La.)	3	210	1	0	0	3	3
Goose Creek	8	265	3	0	1	24	25
Humble	4	165	1	0	1	5	6
Hull	20	5,465	6	2	5	20	25
Jennings (La.)	2	0	2	0	0	3	3
Markham	0	0	0	0	2	0	2
Orange	15	3,180	4	0	1	21	22
Pierce Jct.	0	0	0	0	0	2	2
Spindletop	5	155	1	0	2	3	5
Saratoga	5	40	3	0	3	5	8
Sour Lake	5	40	2	0	2	3	5
Vinton	4	410	1	0	2	7	9
West Columbia	3	110	1	0	2	6	8
Miscellaneous:							
(Gulf Coast)	8	0	8	0	..	..	..
Total June 94		11,830	36	2	26	114	140
Total May.101		18,915	48	0	30	127	157
Difference.	7	7,085	12	2	4	13	17
Southwest Fields—							
Luling	6	13,000	0	3	24	58	82
Laredo	14	1,075	4	1	4	20	24
Somerset	4	42	0	0	2	5	7
Calliham	11	310	2	2	5	8	13
Rockdale-							
Minerva	3	40	0	1	2	11	13
Miscellaneous..	2	0	1	1	114	386	500
Total S. W. for June	40	14,467	8	8	151	488	639
Total S. W. for May	59	71,450	12	5	146	388	534
Difference	19	56,983	4	3	5	100	105
Gr. total.	134	26,297	44	10	177	602	779
Gr. total, May	160	90,365	60	5	176	515	691
Difference	26	64,068	24	5	1	87	88

BATSON
Wells Completed
Knight, Paraffin Oil 37..... 15
Paraffin, Ada Bell Oil 72..... 15
Paraffin, Ada Bell Oil 73..... 10
Paraffin, Ada Belle Oil 74..... 5
Milhome, S. R. Buchanan 76..... 15
Counselman, East Batson Oil 3..... abd
Hooks, Duetser Oil 1..... 25
Parrafin, Sun Oil Co. 72..... 5
Wells completed..... 9
Production 90
Abandoned 1

BLUE RIDGE
Wells Completed
Blakely, Gulf Prod. 6-B..... 700
Wells completed 1
Production 700

BIG CREEK
Wells Completed
Davis, Gulf Prod. & Snowden & McSweeney 12 1000
Wells completed..... 1
Production 1000

DAMON MOUND
Wells Completed
Jackson, Sinclair O. & G. 22..... abd
Bryan, Sinclair O. & G. 30..... dry
Wells completed 2
Abandoned 2
Dry 1

EDGERLY
Wells Completed
Landry, A. L. Gibson 2 (wo)..... s.w.
Fairchilds, Lake Charles Pet. 1 (wo) 10
Bright-Penn.. Gulf Ref. 7 (wo)..... 200
Wells completed 3
Production 210
Salt water 1

GOOSE CREEK
Smith, Humble Oil & Ref. 57 ..... abd
Schilling, Humble Oil & Ref. 11 (wo).. 100
Schilling, Humble Oil & Ref. 33 40
State land, Gulf Production 5 (wo)... 25
Wright, Gulf Production 5 (wo) 25
Schilling, Blakely Oil 7 ..... s.w.
Bartlett-Smith, Sun Co. 9 75
Spillman Island, J. R. Copeland Co. 2. abd
Wells completed 3
Production 265
Abandoned and salt water 3

HUMBLE
Lee, R. S. Hardin et al 1 ..... w.
Landslide, Southern Pet. 39 (wo)..... 75
Moonshine, Williams et al 1 40
Koehler, The Texas Co. 14 (wo) 50
Wells completed 4
Production 165
Water 1

HULL
Merchant, Humble Oil & Ref. 2.....1500
Sterling, Humble Oil & Ref. 2 2000
Crosbie, Humble Oil & Ref. 1..... abd
Hankamer, Humble Oil & Ref. 11.... s.w.
Marshall, Humble Oil & Ref. 5..... dry
Phoenix, Gulf Production 41 150
Phoenix, Gulf Production 33 (wo) ... 400
Phoenix, Gulf Production 40 100
Phoenix, Gulf Prod. 34 (wo)..... 200
Harrison, Gulf Production 6-A 350
Dolbear, Republic Production and Houston Oil 58 (wo) 350
Dolbear, Republic Production and Houston Oil 81-B ..... s.w.
Dolbear, Republic Production and Houston Oil 82 100
Dolbear, Republic Production and Houston Oil 83 ..... s.w.
Taylor, Houston Production 1 (wo) ... 30
Rivere, Link Oil 3 (wo) 160
Rav. W. B. Flynn 4 ..... dry
Mecom, Mecom Oil 2 (wo) 30
Abel, Monarch Oil & Ref. 1 (wo) 50
Abel, Monarch Oil & Ref. 8 75
Miller, Monarch Oil & Ref. 4 ..... gas
Wells completed 20
Production 5465
Abandoned and salt water 6
Gas 2

JENNINGS
Fee, Robinson Oil 4 ..... abd
Latrielle, The Texas Co. 43 ..... s.w.
Wells completed 2
Abandoned and salt water 2

ORANGE
Chesson, Mutual Oil 1 (wo) 175
Chesson, Mutual Oil 5 (wo) 50
Carbello, Edgerly Pet. 7 (wo) 300
Carebello, Edgerly Pet. 2 (wo) 30
Hager-Moore, Gulf Production 6 500
Winifree, Gulf Production 3-A (wo).. 15
Pevito, Gulf Production 4 ..... abd
Chesson, Gulf Production 1 (wo)..... 25
Winifree, Gulf Production 1 (wo).....1500
Hammam-Consolidated, Gulf Prod. 1.. 450
Leon, Gulf Coast Oil 5 (wo) 140
State Land, Rycade Petroleum 3-A abd s.w.
Smith-Foreman, Kishi Dev. 2 (wo) ... s.w.
Kishi, Kishi Dev. 5-E ..... abd
Winifree, Humble Oil & Ref. 4 (wo) ... 15
Wells completed 15
Production 3180
Abandoned and salt water 4

SPINDLETOP
Lone Acre, Eddy Oil 6 30
Trembly, Sheffield et al 1 ..... abd
Gladys, Gulf Production 206 75
McFadden, Unity Oil 83 5
Fort Worth, Wilson & Broach 10 45
Wells completed 5
Production 155
Abandoned 1

SARATOGA
83-B, Rio Bravo Oil .....abd. s.w.
Queen City, Paggi Brothers 42 35
Kirby, Skinner Oil 13 ..... s.w.
San Bernard Oil 5 5
Island, Weldon Oil 5 ..... w.
Wells completed 5
Production 40
Abandoned and salt water 3

SOUR LAKE
Fee, The Texas Co. 251 (wo) 10
Fee, Gilbert Oil 93 ..... abd
Carpenter, J. S. Jackson 11 10
Minor, Lake View Oil 5 (wo)..... abd
Hardin, Humble Oil & Ref. 32 20
Wells completed 5
Production 40
Abandoned 2

WEST COLUMBIA
Smith, Humble Oil & Refining 2 100
Tyndale-Wyoming, Humble O. & R. 6 10
Robertson, The Sun Co. 5 (wo) ..... s.w.
Wells completed 3
Production 110
Salt water 1

VINTON
G. N. G., Gulf Refining 33 ..... dry
Gray, Gulf Refining 1 300
Parks, Wilson & Tucker 8 100
Vincent, Vinton Petroleum 12 10
Wells completed 4
Production 410
Dry 1

MISCELLANEOUS
Harris County—
Powell, near Addicks, The Texas Co. 1 abd
Dopslauk, near Addicks, Texas Co. 1 abd
Allum, The Texas Co. 1 ..... abd
Hockley, Warren, Texas Exploration 17 s.w.
Montgomery County—
Near Willis, Shawver et al 1 ..... abd
Angelina County—
Spivey, Funk & McFarland 1 ..... abd
Cameron Parish, South Louisiana—
Johnson Bayou Prospecting Co. 6 ... abd
Hackberry Island, Yount-Lee Oil 2 ... abd
Wells completed 8
Abandoned and salt water 8

SOUTHWEST FIELDS
LULING
Fields, Beauchamp Petroleum 2 1000
Allen, United North & South Oil 5...10000
Allen, United North & South Oil 16...2000
Allen, United North & South Oil 10-A gas
Harris, H. C. Thorman, 2 ..... gas
Allen, The Texas Co. 12 ..... gas
Wells completed 6
Production 13000
Gas 3

LAREDO
Cornhuskers Oil 3 200
Wolcott Oil 4 100
Richmond-Garcia Oil 4 150
Andrews Petroleum 3 ..... abd
Associated Oil 1 ..... gas
Sharta Oil 1 125
Associated Oil 10 100
Shasta Oil 6 100
Carnahan Producing & Refining 59... 100
Quigg & Olsan 3 100
Allsworth Brothers Oil 1 ..... abd
Wheatley et al 9 100
Binney Oil 1 ..... abd
Russell et al 1 ..... abd
Wells completed 14
Production 1075
Abandoned 4
Gas 1

SOMERSET
Pyron, Witherspoon Oil 13 3
Wells, Witherspoon Oil 2 15
Knight, Helvetia Copper 6 6
Wells, Grayburg Oil 9 15
Wells completed 4
Production 42

CALLIHAM
Lark, Lightfoot et al 1 25
Fisher, Kipp Oil 3 ..... gas
Glass, Three Rivers Oil 1 100
Stitz, Three Rivers Oil 2 75
Stitz, Stephenson Co. 1 50
Lark, Southern Natural Gas 7 ..... gas
San Bale Oil 6 50
Stitz, Wilkinson & Lightfoot 1 10
Stitz, Laughter & Napier 1 ..... abd
Stitz, Stanley Oil 1 ..... abd
Stitz, Adams & Everett 1 ..... abd
Wells completed 11
Production 310
Abandoned 3
Gas 2
Gas production 15,000,000

MISCELLANEOUS—SOUTHWEST
Bexar County—
Mathey, Houston Oil 1 ..... abd
San Patricio County—
Miller, Plateau Oil 1 ..... gas
Wells completed 2
Abandoned 1
Gas 1
Gas production 50,000,000

RIGS AND DRILLING WELLS
BATSON
Rigs
Counselman, East Batson Oil 6.
Wells Drilling
Paraffine, Ada Belle Oil 75.
Milholm, S. R. Buchanan 9.
Hodges, Kirby Petroleum 2.
Rigs, 1; wells drilling, 3; total, 4.
BLUE RIDGE
Wells Drilling
West-Schenck, Gulf Production 5.
Esperson, Gulf Production 2.
Wells drilling, 2.
BIG CREEK
Rigs
Texas, Union Sulphur Co. 1, 2.
Wells Drilling
Ahlers, Oil Production 2 s. d.
Ahlers, Rich et al 1.
Davis, Gulf Production and Snowden and McSweeney 13.
Wheat, Gulf Production and Snowden and McSweeney 8.
Rigs, 2; wells drilling, 4; total 6.
BARBER HILL
Rigs
Collier, Kirby Pet. and Texas Co. 1.
Rice lands, Kirby Pet. and Bennett 1.
Rigs, 2.
DAMON MOUND
Wells Drilling
Smith, Humble Oil & Refining 2.
Bryan, Sinclair Oil & Gas, 30 deepening.
Masterson, Sinclair Oil & Gas 20.
Wells, drilling 3.
EDGERLY
Wells Drilling
Lilliard, G. W. Gray 5 (wo).
Wilson, Evans & Stoval 2 (wo).
Moore, Green Oil 5 (wo).
Wells drilling, 3.
GOOSE CREEK
Rigs
Smith, Humble Oil & Refining 47 (wo).
Wells Drilling
Wright, Southern Exploration 5.
Duke, Inca Petroleum 4.
Galliard, Gulf Coast Oil 39.
Schilling, Blakely Oil 7 (wo).
Chapman-Bryan, Gulf Production 7.
Hirsch, Gulf Production 3.
Beaumont, Gulf Production 29.
Schilling, Gulf Production 5 (wo).
Smith, Gulf Production 18.
Briggs, Gulf Production 11.
J. Galliard, Gulf Production 16.
H. Galliard, Gulf Production 2 (wo).
Schilling, Humble Oil & Refining 30 (wo).
Harrell, Humble Oil & Refining 3.
Sweet, Humble Oil & Refining 26.
Peninsula, Humble Oil & Refining 27.
Galliard 25-A, Humble Oil & Refining 51.
Smith, Humble Oil & Refining 56, 58.
Bartlett-Smith, Sun Oil Co. 4.
Busch, Hisgen Petroleum 2.
Bryan, J. R. Copeland Co. 5
Freeman, La Porte Oil & Refining 5.
Dannebaum, La Rue Oil 5.
Rigs, 1; wells drilling, 24; total, 28.
HUMBLE
Rigs
Lee, R. C. Hardin et al 2.
Wells Drilling
Landslide, Southern Petroleum 40 (wo).
Hirsch, Martin & Chereaux 17.
Morris, Morris & Prewitt 2.
Bissonett, John Derring 2.
Moonshine, Williams et al 3.
Rigs, 1; wells drilling 5; total 6.
HULL
Rigs
Phoenix, Gulf Production 43.
Baldwin, Gulf Production 10.
Merchant, Humble Oil & Refining 3.
Merchant, Yount-Lee Oil 10.
Mecom, Mecom Oil 6.
Wells Drilling
Phoenix, Gulf Production 42.
Harrison, Gulf Production 8.
Hannah fee, Gulf Production 14, 15
Thomas fee, Gulf Production 6.
Morris-Phillips, Gulf Production 11
Hannah, Humble Oil & Refining 1.
Barngrover, Houston Prod. 11.
Miller, Monarch Oil & Refining 4 (wo).
Dolbear, Republic Production and Houston Oil, 51, 53 (wo); 81, 84, 85.
Merchant, Yount-Lee Oil 8.
Stengler, Yount-Lee Oil 2.
Hannah, Texas-Vacuum Oil 3.
Ray, W. B. Flynn 4 deepening.
Mecom, Mecom Oil 3 (wo).
Canter, Red Cantor Oil 2, deepening.
Rigs, 5; wells drilling, 20; total, 25.
JENNINGS
Wells Drilling
Latrielle, Rycade Petroleum 2.
Latrielle, Texas Co. 43 deepening.
J. C., Gulf Refining 18.
Wells, drilling, 3.
MARKHAM
Rigs
Myers, Rycade Petroleum 1.
McManus, Rycade Petroleum 1.
Rigs, 2.
ORANGE
Rigs
Winifree, Humble Oil & Refining 10 (wo).
Wells Drilling
Winifree, American National Oil 1.
Brown, Brownie Babbittee Oil 2, 3.
McLean, Brownie Babbittee Oil 9.
State land, Rycade Petroleum 2-E, 4, 5.
Kishi, Rycade Petroleum 4.
Chesson, Orange Petroleum 7 (wo).
Chesson, Mutual Oil 11; 3 (wo).
Brown, Sun Co. 5 s. d.
Gunstream, Sun Co. 5.
Kato, Sun Co. 1 deepening.
Granger, Sinclair Oil & Ref. 2 (wo).
Hager fee, Gulf Production 15, 16; 4 deepening; 11 (wo).
Peveto, Gulf Production 7.
Hager-Moore, Gulf Production 11.
Rigs, 1; wells drilling, 21; total 22.
SPINDLETOP
Rigs
Gladys, Gulf Production 151.
McFadden, Unity Oil 84.
Wells Drilling
Hogg-Swayne, Stella Oil 17.
Gladys, Rycade Petroleum 1.
Sunshine, John Wynne's 1.
Rigs, 2; wells drilling, 3; total 5.
SARATOGA
Rigs
Queen City, Paggi Brothers 43.
B—Rio Bravo Oil 210, 211.
Wells Drilling
Gulf, Cotton Oil 4.
Kirby, Skinner Oil, 13 deepening.
Lewis, Paggi Brothers Oil 4.
P—2, Rio Bravo Oil 2
Bryan, Rio Bravo Oil 2.
Rigs, 3; wells drilling, 5; total, 8.

SOUR LAKE

Rigs

Cannon, Bowser Oil &.
Carpenter, J. S. Jackson 4 (wo).

Wells Drilling

Hardin, Gulf Production 34.
Fee, The Texas Co. 232.
Fee, Gilbert Oil 23 (wo).
Rigs, 3; wells drilling, 3; total, 5.

VINTON

Rigs

Star, Gulf Refining 32.
Gray, Gulf Refining 2.

Wells Drilling

G. N. G., Gulf Refining 50.
Johnson, Sun Oil Co. 2 deepening.
Gray, The Texas Co. 25.
Gray, Marrs McLean 5 (wo).
Lyons, Just Oil & Refining Co. 2 deepening.
Gray, Vinton Petroleum 47.
Vincent, Gulf Coast Oil 13.
Rigs, 2; wells drilling, 7; total, 9.

WEST COLUMBIA

Rigs

Hogg, Gulf Production 6.
Robertson, Sun Oil Co. 3 (wo).

Wells Drilling

Badge, Humble Oil & Refining 2.
T-W, Humble Oil & Refining 9.
Abrams, The Texas Co. 11.
Hogg, The Texas Co. 80- 81.
H. Masterson, Gulf Production 3 (wo).
Rigs, 2; wells drilling 6; total 8.

SOUTHWEST FIELDS

LAREDO

Rigs

Mid-Ojulas, Shasta Oil 7.
Schott, O. W. Killiam 2.
Schott, Kirkpatrick & Lewis 2.
Mid-Ojulas, Cin-Tex Petroleum 6

Wells Drilling

Schott Pool—Poor Oil 1.
Carnahan Producing & Refining 60.
Mid-Ojulas-Richmond Garcia Oil 4, 6.
Wheatley et al 10.
Wolcott—Calumet Petroleum 1.
Chandler & Gear 7.
Magnolia Petroleum 10.
Alonzos Oil 2.
Cornhuskers Oil 3, 4.
Aviator—Associated Oil 11.
Rydal Oil 2.
Andrews Petroleum 1
Car-Tex—Carolina-Tex Oil 6.
Morgan-Gibbie 2.
Boyd, Boyd Oil 1.
Brunie, Cole Petroleum 4.
Pratt, A. D. J. Syndicate 2-B.
Walker, H. H. Palmer 1.
Rigs, 4; wells drilling, 20; total, 24.

SOMERSET

Rigs

Hamilton, H. L. Hamilton Oil 7, 11.

Wells Drilling

Miller, Associated Oil 12.
Smith, Helvetia Copper 4.
Hartung, Grayburg Oil 17.
Ernst, Grayburg Oil 28.
Brown, Rock Cliff Oil 1 shut down.
Rigs, 2; wells drilling, 5; total, 7.

CALLIHAM

Rigs

Glass, Three Rivers Oil 2.
——, Lightfoot et al 6.
Welsh, Kipley and others 1.
Jacobs, Grubstake Investment 3.
Stitz, Frio Oil 1.

Wells Drilling

Lowe, D. C. & M. Co. 1.
Byrne, Pinnell et al 1 shut down.
Jacob, Picket et al 1.
Brown, Welsh et al 1.
Fisher, Bower Leasing Co. 1.
Hicks, Coquet et al 1.
Lark, Grubstake Investment.
Fisher, Hoard et al 1 shut down.
Rigs, 5; wells drilling 8; total, 13.

ROCKDALE-MINERVA

Rigs

Fee, Roundtree & Lee 3, 5.
McClelland, Fogel Oil 9.

Wells Drilling

Fee, Roundtree & Lee 4.
Sterisky, Barrow et al 1.
McClelland, Fogel Oil 8.
Henry, Gwnes Oil 14, 16.
Fee, Phillips Oil 2.
Phillips, Texas Petroleum 4.
Neihaus, Baggett Brothers 3.
Fee Van Gotem 2 shut down.
Neihaus, W. W. Bynum 7.
Roark, Rockdale Oil 1 shut down.
Rigs, 2; wells drilling, 11; total, 13.

LULING

Rigs

Allen, J. K. Hughes Co 9, 10, 15.
Allen, United North & South Oil 25, 26, 27, 28, 29, 30.
Allen, Grayburg Oil 8, 9, 10, 11, 12.
Schubert, Magnolia Pet. 8, 9, 10, 11, 12.
McKean, Grayburg Oil 8, 9, 10.
Baker, United North & South 1, 6, 18.

Wells Drilling

Allen, United North & South 14, 15, 18, 19, 20, 21, 23, 24 shut down.
Marines, United North & South 13, 14, 15.
Rios, United North & South 7.
Trammel, United North & South 4, 5 s.d.
Tabor, United North and South 14, 15 s.d.; 18.
C. Byrd, United North & South 3.
Hardeman, United North & South 1 dpng.
A. Mercer, United North & South 6, 7, s.d.
W. F. Mercer, United North & South 7, 8, shut down.
Gideon, United North & South 5 s.d.
Stairs, United North & South 4, 5, 6, s. d.
Baker, United North & South Oil 8, 12, 13, 14, 15.
Merriweather, United North & South 4.
Walker, Big Gusher Oil 1 shut down.
Merriweather, Rio Bravo Oil 10.
Allen, J. K. Hughes Dev. 8, 9, 10 s. d.
Allen, The Texas Co. 8, 9, 10, 11.
Schubert, Magnolia Petroleum 5, 6, 7.
Harris, H. C. Thorman 2 deepening.
Frost, C. C. Cannan 1 s. d.
McKean, Grayburg Oil 6, 7, 8.
Jarmon, Moore Oil 5, 6.
Harris, J. K. Hughes 2, 3, 4, 5, s. d.
McKean, Danciger and Plateau Oil 2.
River, Bassett & Miller 1.
Rigs, 24; wells drilling, 58; total, 82.

N. LOUISIANA-ARKANSAS

Summary of Field Operations

Districts—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union County, (Smackover-El Dorado)..	93	23,322	2	4	33	144	177
Ouachita Co.: (North Smackover)	63	5,905	3	3	33	83	121
Stephens Field: (Columbia & Ouachita Co..	3	85	0	0	4	14	18
Nevada County	3	80	1	0	3	10	13
Bellevue	9	172	1	0	1	6	7
Caddo	5	85	1	0	1	17	18
Claiborne	0	0	0	0	0	9	9
Cotton Valley	5	4,400	2	1	9	21	30
De Soto	0	0	0	0	1	1	2
Red River	1	0	1	0	0	2	2
La. wildcats .	20	0	2	18	8	48	56
Ark. wildcats	13	0	13	0	5	27	32
Total June..	215	33,949	26	26	103	382	485
Total May .	219	40,215	19	10	124	408	532
Difference .	4	6,266	7	16	21	26	47

UNION COUNTY, ARKANSAS

8-16-15 Bilyeu, Anderson et al 2..... 350
17-16-15 S. D. Cook, Anderson et al 2... 350
17-15-15 S. D. Cook, Anderson et al 3... 250
1-16-17 LaGrone, Arkansas Fuel Oil Co. 3 55
1-16-17 LaGrone, Arkansas Fuel Oil Co. 4 35
19-16-15 Powell, Bond & Evans 1..... 600
19-16-15 Scott, Bond & Evans 2 500
19-16-15 Wilson, Bond & Evans 3..... 500
19-16-15 Moore, Braswell et al 3 300
25-16-16 Burton, Cherokee Petr. Co. 1.. 500
21-16-16 Wells, Cook, T. L. 1 350
25-16-16 Hancock, Caldwell et al 1....1000
29-16-15 Alphin, Crosbie, J. E. 1..... 600
29-16-15 Alphin, Crosbie, J. E. 3 300
19-16-15 Scott, Crosbie, J. E. 2 400
13-16-16 Smith, Cross et al 1..... 100
18-17-14 Ezell, Daniels et al 2..... 35
18-16-15 Smith, Dunn Oil Co. 3..... 125
1-16-17 Neely, Dyer Brothers 2..... 40
19-16-15 Scott, Federal Petroleum Co. 3. 60
18-16-16 Smith, Federal Petroleum Co. 2 250
18-16-16 Smith, Federal Petroleum Co. 3 100
1-16-17 Staples, Gilliland, W. H. 2.... 70
24-16-16 Moore, Gulf Refining Co. 1.... 85
23-16-16 Hicks, Gulf Refining Co. 1.... dry
18-16-15 Smith, Henderson et al 3..... 150
20-16-15 Hicks, Hickman et al 3..... 500
30-16-15 Burton, Hollyfield et al 1..... dry
19-16-15 Moore, Humble Oil & Refining Co. 3 100
7-16-15 Lawton, Imperial Oil & Gas Co. 4 150
1-16-15 T. G. Murphy, Imperial Oil & Gas Co. 2 150
29-17-14 T. G. Murphy, Imperial Oil & Gas Co. 1 180
25-16-16 Burton, Johnson et al 1 1200
7-16-15 Bradford, Keene & Woolf 1... 60
28-16-15 Hinley, Keene & Woolf 1.... 60
21-16-15 Harrell, Kouri et al 1..... 350
13-16-16 Smith, Lion Oil & Refining Co. B-2 600
13-16-16 N. Smith, Lion Oil & Refining Co. B-1 300
24-16-16 Hedgewood, Lion Oil & Refining Co. 2 1000
24-16-16 Hedgewood, Lion Oil & Refining Co. 3 400
8-16-15 G. E. Murphy, Lion Oil & Refining Co. 6 200
15-16-15 Murphy, Marine Oil Co. 4..... 150
19-16-15 McKinney, Myers, Hill 2..... 50
24-16-16 Moore, Olvey et al 2 400
9-16-15 Murphy, Ohio Oil Co. 2..... gas
18-16-15 Berry, Penguin Oil Co. 2..... 125
11-16-15 Alphin, Phillips Petroleum Co. B-1 300
10-16-15 Giller, Phillips Petroleum Co. 3 gas
21-15-15 Churchyard, Preston Oil Co. 1 250
18-16-15 Berry, Pure Oil Co. 4..... 30
15-16-15 Craig, Pure Oil Co. 9..... 50
21-16-15 N. Hays, Pure Oil Co. 2..... 250
21-16-15 N. Hays, Pure Oil Co. 5..... 100
20-16-15 L. Hicks, Pure Oil Co. 4..... 120
20-16-15 L. Hicks, Pure Oil Co. 5..... 150
20-16-15 L. Hicks, Pure Oil Co. 7..... 150
29-16-15 L. M. Hicks, Pure Oil Co. 1.. 500
20-16-15 R. J. Hicks, Pure Oil Co. 3.... 100
20-16-15 Stocks, Pure Oil Co. 2..... 60
20-16-15 Wilson, Pure Oil Co. 1..... 300
24-16-16 Hedgewood, Ramage et al 2... 450
20-16-15 Hicks, Ray Drilling Co. 3..... 500
23-16-15 E. G. Murphy, Richardson, Sam, 3 500
19-16-15 Scott, Roxana Petroleum Corp. 3 600
19-16-15 Scott, Roxana Petroleum Corp. 4 1500
8-16-15 Murphy, Sandford et al 3..... 150
24-16-16 Hedgewood, Selp et al 1.....2000
9-16-15 Hardy, Standard Oil Co. 14... gas
9-16-15 Hardy, Standard Oil Co. 19... 37
22-16-16 Linglebach, Standard Oil Co. 7 145
20-16-15 Hicks, Stewart et al 2..... 150
20-16-15 Hicks, Stewart et al 3..... 600
20-16-15 Hicks, Stewart et al 4..... 400
19-16-15 McKinney, Stewart et al 1.... 100
1-16-16 Primm, Sun Co. 2 ..... gas
1-16-17 Smith, Sun Co. 2 100
19-16-15 Wilson, Sun Co. 2..... 150
1-16-17 Neely, Sutherland et al 1..... 90
24-16-16 Smith, Sure Oil Co. 2..... 500
19-16-15 Wilson, Sun Co. 2..... 150
1-16-17 Neely, Sutherland et al 1..... 90
24-16-16 Smith, Sure Oil Co. 2..... 500
24-16-16 Smith, Sure Oil Co. 4.....2000
24-16-16 Smith, Sure Oil Co. 6..... 800
3-16-15 Alphin, The Texas Co. 4..... 24
21-16-16 Cook, The Texas Co. 5..... 210
24-16-16 Hedgewood, The Texas Co. 2.. 235
24-16-16 Alphin, Unity Petroleum Co. A-4 400
24-16-16 Alphin, Unity Petroleum Co. B-2 1000
24-16-16 Alphin, Unity Petroleum Co. C-1 4000
7-17-14 Lyon, Vag Oil Co. 1..... 250
24-16-16 Moore, Waxler et al 1..... 500
24-16-16 Alphin, Woodley Petroleum Co. 2 500

Wells completed 93
Production 23222
Dry 2
Gas 4
Gas production 110,000,000

OUACHITA COUNTY

20-15-16 Rowland, Atlantic Oil Producing Co. E-1 100
25-15-17 Smith, Atlantic Oil Producing Co. 5 40
25-15-16 Smith Atlantic Oil Producing Co. 6 65
25-15-16 Wells, Atlantic Oil Producing Co. B-1 30
25-15-16 Wells, Atlantic Oil Producing Co. B-4 50
24-15-17 Reynolds, Arkansas Drilling Co. 1 60
31-15-17 Patton, Arkansas Invincible Oil Co. B-3 55
20-14-16 Halford, Bray-Hawthorne 1... dry
21-15-16 Hughes, Burton, Trustee 8.... 110
19-15-16 Anderson, El Dorado Union Oil Co. 2 150
21-15-16 Hughes, El Dorado Union Oil Co. 6 40
36-15-17 LaGrone, El Dorado Union Oil Co. 2 150
20-15-16 Minor, Forest Oil Co. 1..... 100
25-15-17 LaGrone, Gilliland Oil Co. 3.. 40
36-15-17 LaGrone, Gilliland Oil Co. S-2. 60
29-15-16 Kyle, Gilliland Oil Co. 8..... gas
36-15-17 W. A. Smith, Gilliland Oil Co. 2 80
28-15-16 Fincher, Gulf Refining Co. 6.. 120
29-15-16 Meakin, Gulf Refining Co. 6... 75
29-15-16 Solmson, Gulf Refining Co. 8.. 75
33-15-15 Umpstead, Gulf Refining Co. A-7 125
36-15-17 Werner, Gulf Refining Co. A-5 150
25-15-17 Smith, Harris et al 1..... 25
26-15-17 Jeffus, Hogan et al 1..... 25
26-15-17 Anderson, Home Refining Co. 3 125
31-15-15 Laney, Houston Oil Co. 9..... gas
31-15-16 Patton, Houston Oil Co. 4.... 100
5-16-15 Umsted, Humble Oil & Refining Co. 5 ..... gas
23-15-17 Anderson, Hunt et al 1..... 75
23-15-17 Anderson, Hunt et al 2..... 40
28-15-16 Stringfellow, Hurley et al 3... 100
31-15-16 Hughes, Johnson E. 3..... 100
24-15-17 Wells, Kouri et al 1 50
21-15-16 Smith, Magnolia Petroleum Co. B-7 60
29-15-16 McElroy, Majestic Smackover Oil Co. A-1 200
27-15-17 Mullins, Mullins Drilling Co. 3. 140
26-15-17 Brierton, Myerscough et al 2.. 50
26-15-17 Jeffus, R. B. Nelson 1..... 35
19-15-16 E. Bryant, J. E. Newton 1 ... dry
36-15-16 McKenzie, Oil Field Corp. 2.. dry
33-15-16 Hernsberger, Phillips Petroleum Co. 4 400
30-15-15 Cunningham, Pure Oil Co. 1.. 200
25-15-17 Jeffus, Ramage et al 1..... 40
19-15-16 Chandler, Skelly Oil Co. 2.... 180
19-15-16 Chandler, Skelly Oil Co. 3.... 275
19-15-16 Chandler, Skelly Oil Co. 4.... 120
21-15-16 Minor, Standard Oil Co. 4.... 30
24-15-17 Berry, Sun Co. 3 90
30-15-16 LaGrone, The Texas Co. 11.... 90
31-15-16 W. A. Smith, The Texas Co. 5. 240
31-15-16 Stout Lbr. Co., The Texas Co. 3 125
31-15-16 Stout Lbr. Co. 4..... 80
28-15-16 Stringfellow, The Texas Co. 1. 30
29-15-16 Stringfellow, The Texas Co. 4. 40
30-15-16 Snow, The Texas Co. 8..... 90
30-15-16 Watts, White et al 3..... 80
30-15-16 Watts, White et al 4 100
29-15-16 Berg, Whittiken & Tate 2.... 35
23-15-17 Anderson, Whittiken et al 1... 40
23-15-17 Anderson, Wonder State Oil Co. 3 80
23-15-17 Anderson, Wonder State Oil Co. 4 100
23-15-17 Anderson, Wonder State Oil Co. 5 80
36-15-17 Smith, Wingfield et al 3..... 30

Wells completed 63
Production 5905
Dry 3
Gas 3
Gas production 90,000,000

STEPHENS FIELD

36-15-20 Weaver, Atlantic Oil Producing Co. 3 25
31-15-19 Hall, Chio Oil Co. 4 30
25-15-20 Hammond, Transcontinental Oil Co. 3 30

Wells completed 3
Production 85

NEVADA COUNTY

11-14-21 Waters, Keystone Oil Co. 6 40
10-14-21 Waters, Smitherman-McDonald 4 40
2-14-21 Ellis, Wooten et al 1..... dry

Wells completed 3
Production 80
Dry 1

BELLEVUE FIELD

15-19-11 Bliss & Weatherbee, Bliss & Weatherbee B-12 40
15-19-11 Bliss & Weatherbee, Bliss & Weatherbee B-13 35
15-19-11 Bliss & Weatherbee, Bliss & Weatherbee B-14 ..... dry
15-19-11 Bliss & Weatherbee, Gulf Refining Co. A-19 10
10-19-11 Bliss & Weatherbee, Humble Oil & Refining Co. A-17 30
10-19-11 Bliss & Weatherbee, Humble Oil & Refining Co. A-18 35
10-19-11 Bliss & Weatherbee, Humble Oil & Refining Co. A-19 10
11-19-11 Louisiana Fee, Standard Oil Co. 8 4
14-19-11 Wyche, Standard Oil Co. 17.... 18

Wells completed 9
Production 172
Dry 1

CADDO DISTRICT

15-18-16 Sharp, Brewer & Sewall 1..... dry
14-21-15 Robertshaw, Dixie Oil Co. 59. 12
14-21-15 Robertshaw, Dixie Oil Co. 60. 15
15-20-16 Ferry Lake, Gulf Refining Co. 217 48
22-21-15 Logan, Tarver et al 8..... 10

Wells completed 5
Production 85
Dry 1

COTTON VALLEY

23-21-10 Cox, Fortuna Oil Co. 1..... gas
17-21- 9 Truitt, Fortuna Oil Co. 1.... dry
11-21-10 A. J. Hodges, Gulf Refining Co. 1 600
14-21-10 Babb, Humble Oil & Refining Co. 2 800
14-21-10 Merritt, Ohio Oil Co. 2 3000
31-22- 9 Gleason, White Oil Corp 1.... dry

Wells completed 6
Production 4400
Dry 1
Gas 1
Gas production 35,000,000

RED RIVER

24-12-11 Armistead, Fortuna Oil Co. 16. dry

LOUISIANA WILDCATS

LaSalle Parish—

21-11-2e Urania, Helm & Burch 1 ..... dry

Moorhouse Parish—

28-20-5 Erwin, Carson Carbon Co. 2... gas
16-22-5 Stephenson, Humphreys Carbon Co. 1 ..... gas
24-20-5 Snyder, Natural Gas Producing Co. 3 ..... gas
24-20-5 Eldridge, Oil Field Exploration Co. 1 ..... gas

Ouachita Parish—

30-19-5 Fee, J. M. Huber 6 ..... gas
36-19-4 Banks, J. M. Huber 2 ..... gas
6-19-5 Fee, Ladell et al 24 ..... gas
32-20-4 Lieber, Ouachita Natural Gas Co. 3 ..... gas
32-20-4 Smith, Ouachita Natural Gas Co. C-5 ..... gas
28-19-5 Fee, Southern Carbon Co. 29.. gas
28-19-5 Fee, Southern Carbon Co. 30 .. gas
12-19-5 Kerr, Southern Carbon Co. 2.. gas
20-19-5 Gibbs, The Texas Co. 5 ..... gas
10-19-5 Tensas Delta Union Gas Producing Co. 1 ..... gas
13-19-4 Kerr, United Oil & Gas Producing Co. 2 ..... gas

Union Parish—

16-20-3 Thompson, Danziger Oil Co. 1. gas
19-19-1e Green, Feazel et al 1 ..... dry
21-21-4 Union Saw Mill, Union Power Co. A-7 ..... gas
21-21-4 Union Saw Mill, Union Power Co. A-8 ..... gas

Wells completed 20
Production 0
Dry 2
Gas 18
Gas production 222,000,000

ARKANSAS WILDCATS

Calhoun County—

16-11-14 Hernsberger. Calhoun Oil & Gas Co. 1 ..... dry

Clark County—

28-5 -23 Langsford, United Petroleum Co. 1 ..... dry

Dallas County—

33-6 -15 Matlock & Riggs, Conway et al 1 ..... dry
5-10-16 Taylor, Stahl et al 1 ..... dry

Drew County—

22-11-7 Graves, Monticello Ridge Oil Co. 1 ..... dry

Grant County—

19-4 -13 Arkansas Short Leaf Lbr. Co. Haley et al 1 ..... dry
31-4 -4 Britch, Power Oil Co. 1 ..... dry
15-5 -12 Steupke, Power Oil Co. 1 .... dry
16-6 -13 Chicago Land & Timber Co., The Texas Co. 2 ..... dry

Hempstead County—

23-11-26 Ellen, Hackathorne et al 1... dry

Lafayette County—

34-19-23 Red River Land Co., Tensas Petroleum Co. 1 ..... dry
16-15-24 Osborne, Lewisville Syndicate 1 dry

Wells completed 13
Production 0
Dry 13

MILLER COUNTY

8-14-27 Adams, Cochran & Ray 1 ..... dry

UNION COUNTY, ARKANSAS

Rigs

8-16-15 Bilyew, Anderson et al 1.
1-16-17 Lewis Werner Saw Mill, Arkansas Drilling Co. 3.
21-17-15 Miller, Bradley & Cazant 1.
7-16-15 Carroll, Chambles Drilling Co. 1.
25-16-16 Hancock, Caldwell et al 2.
11-16-15 Giller, Crawford & Sebastian 7.
3-16-15 Graves, Crawford & Sebastian 4.
29-16-15 Alphin, J. E. Crosbie 2, 4.
12-16-16 Kane, Field Operators Co. 1.
13-16-16 Hedgewood, Gulf Refining Co. 2.
6-16-16 Goff, Holliday, Trustee, 4.
18-16-15 Smith, J. S., Humble Oil & Refining Co. 3.
29-17-14 Morgan, Jett et al 1.
22-18-14 Terrell, Lemond et al 1.
4-16-15 Hays, Lion Oil & Refining Co. 1.
16-16-15 McRea, McPherson Oil Co. 3.
19-16-15 Scott, Ohio Oil Co. 1.
21-16-15 M. Hays, Pure Oil Co. 3.
17-16-15 R. J. Hicks, Pure Oil Co. 3.
29-16-15 Lindsey, Pure Oil Co. 1.
24-16-16 Smith, Pure Oil Co. 5.
8-16-15 Berry, Sandford et al 1.
5-16-16 Saxon, Smitherman-McDonald B-4.
3-16-15 Alphin, Standard Oil Co. of La. 5.
6-16-15 McClanahan, Standard Oil Co. of La. 10.
1-16-17 Smith, The Sun Co. 3.
24-16-16 Smith, Sure Oil Corp. 7.
15-16-15 Craig, United Central Oil Corp. 1.
24-16-16 Alphin, Unity Oil Co. A-5.
8-16-15 Rice, Weatherbee et al B-1.
1-16-17 Hodges, Wright et al 2.

Wells Drilling

19-16-15 Wilson, Amerada Petroleum Corp. 1.
1-16-17 Lewis Werner Saw Mill, Arkansas Drilling Co. 2.
11-16-15 Alphin, Arkansas Fuel Co. 2.
36-16-16 Murphy, Beggs et al 1.
19-16-15 Powell, Bond, Trustee 2.
8-16-15 Harrell, Broderick & Calvert 1.
25-16-16 Burton, Cherokee Petroleum Co. 1.
19-16-15 Alphin, J. W. Clark 1.
2-18-16 Morgan, Constantine Refining Co. 1.
3-16-15 Graves, Crawford & Sebastian 3.
18-17-14 Polk & Ezell, Cross et al 3.
19-16-15 Scott, Federal Petroleum Co. 4.
18-16-15 Smith, Federal Petroleum Co. 4.
1-16-17 Hodges, W. H. Gilliland 3.
11-16-15 M. Alphin, Gulf Refining Co. 8.

13-16-16 Hedgewood, Gulf Refining Co. 1.
3-16-15 Murphy, Hardy, Gulf Refining Co. 9; 11.
5-16-16 L. Werner, Gulf Refining Co., 18; 19; 20.
11-19-12 Teele, Harrell et al 1.
20-16-15 Cook, Harris et al 1.
2-18-16 Morgan, Hicks et al 1.
20-16-15 Hicks, Higgins Oil & Refining Co. 4.
6-16-16 Goff, Holliday, Trustee, 2; 3.
30-16-15 Burton, Hollyfield et al 1.
25-16-16 Burton, Humble Oil & Refining Co. 1.
19-16-15 Moore, Humble Oil & Refining Co. 4.
1-18-14 Cordell, Humble Oil & Refining Co. 1.
3-16-15 Flenniken, Humble Oil & Refining Co. 3.
11-16-15 Giller, Humble Oil & Refining Co. B-1.
20-16-15 Hicks, Humble Oil & Refining Co. 2.
29-17-14 Smith, Imperial Oil & Gas Co. 2.
9-16-15 Murphy, Keene & Woolf 1.
3-16-15 Williams, Kinnebrew et al 2.
24-16-16 Moore, Kouri et al 1.
16-16-16 Saxon, Lanier et al 1.
21-18-15 Pendleton, Leonard, C. H. 1.
17-16-15 Allgulf, Lion Oil & Refining Co. 4.
17-16-15 Burns, Lion Oil & Refining Co. 2.
24-16-16 Hedgewood, Lion Oil & Refining Co. 4.
3-16-15 Roper, Livingston et al 5.
13-16-17 Campbell, Magnolia Petroleum Co. 2.
1-16-17 Neely, Magnolia Petroleum Co. 4.
2-16-17 Smith, Magnolia Petroleum Co. 1.
2-16-17 I. Smith, Magnolia Petroleum Co. 1.
3-16-15 Graves, McFarland et al 3.
19-16-15 McKinney, Myer, Hill et al 3.
19-19-15 Rogers, Montgomery et al 1.
5-16-15 Flenniken, Morris Drilling Co. 1; 7.
14-16-16 Tatum, Natural Gas & Petroleum Co. 2.
30-16-16 Alphin, Page et al A-1.
24-16-16 Moore, Phillips Petroleum Co. 1.
7-16-15 Tatum, Plateau Oil Co. 1.
17-16-15 S. D. Cook, Preston Oil Co. 2.
20-16-15 Berry, Pure Oil Co. 5.
17-16-15 Davis, Pure Oil Co. 1; 2.
16-16-15 Dumas, Pure Oil Co. 3.
20-16-15 F. Hicks, Pure Oil Co. 3.
20-16-15 L. Hicks, Pure Oil Co. 6.
21-16-15 Morrison, Pure Oil Co. 1.
24-16-16 Stocks, Pure Oil C. 3.
24-16-16 Hedgewood, Ramage et al 4.
25-16-16 Smith, Ramage et al 2.
20-16-15 Hicks, Ray Drilling Co. 4.
10-16-15 Lawton, Sam Richardson, L-2.
8-16-15 Flenniken, Roxana Petroleum Corp. C-1.
7-16-15 Carruth, Rutledge, W. E. Tr. 1.
1-16-17 Hodges, Rutledge, W. E., Tr. 1.
8-16-15 Berry, Sandford et al 4.
19-16-15 Henderson, Schuller et al 1; 2.
24-16-16 Hedgewood, John Seip et al 1, 2.
32-15-16 Saxon, Smitherman-McDonald A-5.
3-16-15 Alphin, Standard Oil Co. of La. 8.
11-16-15 Alphin, Standard Oil Co. of La. 14.
22-16-15 Linglebach, Standard Oil Co. of La. 8.
4-16-16 J. S. R. Saxon, Standard Oil Co. of La. 1.
21-19-12 Little, Starke et al 1.
25-16-16 Burton, Star Oil Co. 2.
20-16-15 Hicks, Staves Oil Co. 2.
25-16-16 Moore, Staves Oil Co. 1.
19-16-15 McKinney, Stewart et al 4.
19-16-15 Wilson, The Sun Co. 3.
24-16-16 Smith, Sure Oil Corp. 3.
24-16-16 Smith, Sure Oil Corp. 5.
1-16-17 Neely, Sutherland et al 2.
1-16-17 Stout Lumber Co., Tarver et al 1.
20-17-14 Smith, Terry-Summerfield 5.
21-16-15 Cook, The Texas Co. 6.
24-16-16 Hedgewood, The Texas Co. 3; 4.
2-16-17 J. G. Smith, The Texas Co. 1.
6-16-14 Cargile, Umsted et al 1.
24-16-16 Alphin, Unity Oil Co. A-6; C-2.
23-16-16 Burton, Unity Oil Co. 1.
25-16-16 Burton, Vecino Syndicate 2.
1-18-14 Cordell, Walber et al 1.
24-16-16 Alphin, Woodley Petroleum Co. 3; 4.
6-16-16 Rice, Weatherbee et al A-2.

Shut Down

15-16-15 Giller, Amerada Petroleum Corp. 4.
14-19-11 Union Saw Mill, Berry et al 1.
34-17-12 Clark, Bonderant et al 1.
3-18-12 Stegall, Bonderant et al 1.
9-18-12 Tuberville, Bonderant et al 1.
14-16-16 Thornton, Coker Drilling Co.
13-16-15 Giller, Crawford & Sebastian 2.
14-16-15 Giller, Crawford & Sebastian 6.
22-16-16 Goodwin, Dillon et al 1.
28-15-16 Mullins, Forest Oil Co. 3.
23-16-16 Hicks, Gulf Refining Co. 1.
23-16-15 Clawson, Haviland Oil Co. 1.
23-16-16 Dumas, Hunt et al 1.
9-17-16 Dumas, Hurst et al 1.
34-16-14 Matthews, Isola Oil Co. 1.
15-16-15 W. C. Murphy, Marine Oil Co. 1.
13-16-16 Hearin, McFarland et al 1.
12-17-15 Polk & Ezell, Morgan H. I. 2.
28-16-15 Dumas, Nikander et al 1.
18-17-14 Polk & Ezell, Olvey et al 3.
4-16-16 Saxon, Pan American Oil Co. A-4.
4-16-16 C. L. Saxon, Pan American Oil Co. B-1 B-2.
26-16-15 Goodwin, Pherris et al 1.
28-16-14 Long, Ray et al 1.
7-17-14 Stevens, Ray Drilling Co. 1.
12-16-16 Houston, Simon et al 1.
5-16-16 Saxon, Smitherman-McDonald 3.
5-16-16 C. L. Saxon, Standard Oil Co. of La. B-2.
12-16-17 Hodges, Steel Oil Co. 3.
23-16-16 Dumas, Tarver et al 1.
33-17-13 Burnside, Tater E. T. Tr. 1.
20-16-14 Goodwin, Traffic Oil Co. 1.
23-16-16 Goodwin, Thurman et al 1.
23-16-15 Goodwin, Wilroy et al 1.
1-18-17 Johnson, Wall et al 1.
21-16-15 Gill, Winger et al 2.

Rigs, 38; wells drilling, 144; total, 177.

OUACHITA COUNTY, ARKANSAS

Rigs

26-15-17 Fee, Anderson et al 3.
24-15-17 Reynolds, Arkansas Drilling Co. 2, 3.
34-15-15 Snyder, Arkansas Fuel Oil Co. 4.
30-15-16 Myar Est., Ark. Invincible Oil Co. 3
31-15-16 Patton, Ark. Invincible Oil Co. 8.
24-15-17 Brierton, Atlantic Oil Prod. Co. C-2.
25-15-17 Smith, Atlantic Oil Prod. Co. 1.
25-15-17 Wells, Atlantic Oil Prod. Co. A-4.
25-15-17 Wells, Atlantic Oil Prod. Co. B-2, B-3, B-5.
13-15-17 Copenhaven, Bray-Hawthorne 1.
33-15-15 Berry, J. E. Crosbie 2.
20-15-16 Minor, Forest Oil Co. 2.
10-12-19 Purifoy, Foster & Sandford 1.
31-15-17 Burton, Giles, Trustee 1.
36-15-17 Smith W. A., Gilliland Oil Co. 1.
25-15-17 Wells, Gilliland Oil Co. N-3.
36-15-17 Shirey, Herman & Jackson 1.
32-15-16 Myar Est., Kenne & Woolf 2.
32-15-16 Patton, Leon et al 2.
26-15-17 Anderson, Nelson R. B. 3.
34-15-15 Snyder, Owenwood Oil Corp. 3.
33-15-15 Hernsberger, Phillips Pet. Co. 5.
25-15-17 Jeffus, Ramage et al 3.
30-15-16 Myar Est., Smith Refining Co. 3.
33-15-15 Griffin, Standard Oil Co. of La. 4.
30-15-16 LaGrone, Stumph & Todd 3.
34-15-16 Joyce, Sure Oil Corp. 2.
24-15-17 Berry, Sun Co. 4.
28-15-16 Hughes, Sutton et al 12.
21-15-16 Hughes, Sutton et al 16.
33-15-15 Berry, The Texas Co. 5.
30-15-16 LaGrone, The Texas Co. 9.
28-15-16 Stringfellow, The Texas Co. 5.
25-15-17 Anderson, Whittiken et al 3.
29-15-16 Shirey-Berg, Whittaker et al 1.

Wells Drilling

24-15-17 Reynolds, Arkansas Drilling Co. 2.
30-15-16 McRae, Arkansas Invincible Oil 4.
31-15-16 Patton, Arkansas Invincible Oil B-4
20-15-16 Rowland, Atlantic Oil Prod. Co. C-1
25-15-17 Wells, Atlantic Oil Prod. Co. B-6.
21-15-16 Hughes, Burton, Trustee 9.
24-15-17 Berry, Clark, Dr. 5.
4-16-15 Murphy, Clark & Melat 1.
33-15-15 Berry, J. E. Crosbie 1.
34-15-16 Joyce, T. C., Deshko et al. 1.
20-15-16 Stringfellow, Denver Smackover Oil Synd. 2.
36-15-17 LaGrone, Findley & Stookey 1.
25-15-17 LaGrone, Gilliland Oil Co. S-3.
25-15-17 McRea, Gilliland Oil Co. 2.
25-15-17 Wells, Gilliland Oil Co. S-2.
32-15-16 Myar Est., Gray et al 2.
33-15-15 R. Bennett, Gulf Refining Co. 1.
28-15-16 Fisher, Gulf Refining Co. 7.
28-15-16 Hardin, Gulf Refining Co. 1.
32-15-16 T. C. Patton, Gulf Refining Co. 4.
29-15-16 Solmson, Gulf Refining Co. 9.
29-15-16 Stringfellow, Gulf Refining Co. 5.
36-15-17 Werner, Gulf Refining Co. A-6.
25-15-17 Brierton, Hale et al 2.
36-15-17 Smith, Hamilton L. K. 2.
36-15-17 Anderson, Home Refining Co. 4.
29-15-16 Solmson, Dr. Johnson 1.
29-15-16 Myar, Lanier et al 2.
4-16-15 Berg, Leon et al 1.
20-15-16 Hardin, Magnolia Pet. Co. 1, 2, 3.
31-15-16 Smith, Magnolia Petroleum Co. 9.
29-15-16 McElroy, Majestic Smackover Syn. A-2.
24-15-17 Fee, J. W. Mangus 5.
28-15-16 Hughes, Nat. Gas & Pet. Co. 1.
26-15-16 Jeffus, R. B. Nelson 2.
25-15-17 Reynolds, Palmetto Oil Co. 3.
27-15-17 Hildreth, Peace et al 1.
25-12-16 Eagle Mills Lumber Co., Peltier Oil Co. 2.
25-15-16 Myar, Riggs Drilling Co. 2.
22-15-16 Cramer, J. D. Reynolds 2.
19-15-16 Chandler, Shelly Oil Co. 5.
32-15-17 Moon, Smackover Creek Oil Co. 1.
31-15-16 Patton, Smith Refining Co. B-2.
33-15-15 Griffin, Standard Oil Co. of La 3.
34-15-16 Powell, Standard Oil Co. of La. 1.
32-15-16 Umsted, Standard Oil Co. of La. 5.
33-15-15 Umsted, Standard Oil Co. of La. 12.
25-15-17 Shirey, J. S. Smith 1.
26-15-17 Jeffus, Staves et al 1, 2.
20-15-16 McElroy, Sutton et al 3.
29-15-16 Fincher, A. F. Tarver 4
19-15-16 Anderson, The Texas Co. 3.
30-15-16 LaGrone, The Texas Co. 10.
31-15-16 W. A. Smith, The Texas Co. 6.
31-15-16 Snow, The Texas Co. 6, 7.
32-15-16 Solmson, The Texas Co. B-3, B-4.
28-15-16 Stringfellow, The Texas Co. 6.
17-15-16 Tuberville, Weaver & Smithwick, Tr. 1.
30-15-16 Watts, White et al 5.
33-15-17 Anderson, Whittiken et al 2.
26-15-17 Hodges, Whittiken et al 1.
29-15-16 Fincher, Wingfield et al 4.

Shut Down

20-14-16 Halford, Bray-Hawthorne 1.
30-15-17 Ferris Burton, Jimmie Cox 1, 2.
28-15-16 Mullins, Forest Oil 1, 11.
22-15-17 Riley, Hammon et al 1.
24-15-17 Elliott, Howe et al 1.
5-16-15 Hill, Invaders Oil Co. 1.
21-15-16 Richie Est., Johnson Drilling Co. 1.
28-15-16 Mullins, Marr Oil Corp. 4.
27-15-16 Mullins, Morris Drilling Co. 2.
19-15-16 E. Bryant, J. E. Newton 1.
5-16-15 Umsted, Olvey et al 1.
22-15-16 Shirey-Berg, Bob Simmons 1.
5-16-15 Goodwin, Wilson Pet. Co. 1.

Rigs, 38; wells drilling, 83; total, 121.

BELLEVUE FIELD, BOSSIER PARISH

Rigs

10-19-11 Bliss & Weatherbee, Standard Oil Co. 13.

Wells Drilling

10-19-11 Bliss & Weatherbee, Humble Oil & Refning Co. A-16.
23-19-11 Strange, Olmstead et al A-16.
13-19-11 McCloud, Standard Oil Co. 1.
14-19-11 Wyche, Standard Oil Co. 14.

Shut Down

27-19-11 Catlet, Pope et al 1.
27-19-11 Catlet, Webb et al 3.

Rigs, 1; wells drilling, 6; total, 7.

CADDO PARISH

Rigs

13-21-15 Robertshaw, Dixie Oil Co. 61.

Wells Drilling

23-19-14 Levy Realty & Planting Co., Collins et al 1.
23-21-15 Hanzen, Dixie Oil Co. 2.
15-20-16 Ferry Lake, Gulf Refining Co. 216.
15-23-16 Rodessa Oil & Land Co., La. Tex. Community Oil Co. 1.
22-21-15 Raines, Mutual Oil Co. 10.
9-20-16 Jeems Bayou Hunting & Fishing Club, Reynolds Oil & Gas Co. 4.
11-20-16 Rudersdorf, Rush et al 1.
22-21-15 Lane, Tarver & Bashara, Crye-Lane 11.

Rigs, 1; wells drilling, 12; total, 13.

Shut Down

5-21-15 Barlow, Alabama Pet. Co. 1.
30-19-15 Nickerson, Ark. Caddo Oil Co. 1.
2-16-15 Gardner-Blades, Caddo Western Oil Co. 1.
34-21-16 Louisiana State, Chew et al 1.
27-16-14 Alexander and Ledbetter, Crude Oil Co. 1.
14-21-15 Robertshaw, Dixie Oil Co., 14.
13-21-15 Robertshaw, Dixie Oil Co., 43.
13-21-15 Noel, Keystone Ranger Development Co. 6.
7-21-15 Hertzo, Reed et al 1.

Rigs, 1; wells drilling, 17; total, 18.

COTTON VALLEY

Rigs

11-21-10 Hodges, Gulf Refining Co. 2.
14-21-10 Babb, Humble O. & R. Co. 3 & 4.
11-21-10 Hodges, Humble O. & R. Co. 3.
14-21-10 Merritt, Humble O. & R. Co. 1 & 2.
24-21-10 Pardee, Moffatt & Murphy 1.
2-22-11 Pine Woods Lumber Co., Morefield & Tanner 1.
23-21-10 Hollway, Ohio Oil Co. 1.

Wells Drilling

21-21-10 Logan, Belchic & Laskey 1.
14-21-10 L. Merritt, Fortuna Oil Co. 1 & 2.
12-21-10 A. J. Hodges, Gulf Ref. Co. 1 & 2.
10-21-10 Hodges, Gulf Refining Co. A-1.
22-21-10 W. W. Cox, Hude & Aarnes 1.
11-21-10 A. J. Hodges, Invincible Oil Co. 1 & 2.
14-21-10 Merritt, Invincible Oil Co. 2, 3 & 4.
21-21-10 Crichton, Ohio Oil Co. 1.
13-21-10 Hope Estate, Oil Field Gas Co. A-1.
22-21-10 McInnis, Standard Oil Co. 1.
14-21-10 Merritt, Woodley Pet. Co. 1 & 2.

Shut Down

13-21-10 Hope estate, Oil Fields Gas Co. B-2.
17-19-10 Hudson, Olmstead et al 1.
20-21-10 Miller, Palmer Corp. 1.
8-20- 9 Bible, Stack & Eggers 1.

Rigs, 9; wells drilling, 21; total, 30.

CLAIBORNE

Wells Drilling

26-21- 6 Calhoun, Arnett et al 1.
20-20- 7 Eastep, Dixie Oil Co. 1.
36-22- 7 Gandy, El Dorado Chief Oil Co. 1.
22-19- 5 Fields, Forest Oil Co. 1.
10-20- 5 Loyd, Standard Oil Co. 1.
5-21- 5 Ferguson, Triangle Drilling Co. 1.
30-21- 7 Oakes, White Oil Corp. 18.
30-21- 4 Reynolds, Woodley & Collins 1.

Shut Down

20-21- 8 Aubry, Block Oil & Gas Co. 1.

Rigs, 0; wells drilling, 9; total, 9.

DE SOTO PARISH

Rigs

32-12-16 Matthews, Tarver, A. H., 3.

Wells Drilling

3-11-15 Frost Johnson, Ulrey et al 1.

Rigs, 1; wells drilling, 1; total, 2.

RED RIVER PARISH

Wells Drilling

2-14-12 Fee, LaGrande et al 3.

Shut Down

13-12-10 Marston, Coushatta Syndicate 1.

Rigs, 0; wells drilling, 2; total, 2.

LOUISIANA WILDCATS

Wells Drilling

Bossier Parish—

16-23-12 Bodcau Lumber Co., Estes et al 1.
24-17-12 Smith, Skannall et al 1.
18-18-11 Johnson, Standard Drilling Synd. 1.
16-20-11 Hamilton, Woodley & Collins 1.

Shut Down

11-20-13 Bernstein, Armistead Trustee 1.
24-23-12 Bodcau Lumber Co., Atlantic Oil Producing Co. 1.
22-16-12 Mercer, Davis & Burch 1.
23-18-11 Jones, Sneed et al 1.
4-19-11 McGuffin, Zink et al 1.

Wells Drilling

Caldwell Parish—

21-14- 4 Fee, Culver et al 1.

Wells Drilling

La Salle Parish—

21-11-2e Urania, Bur Ban Oil Co. 2.
27-10-2e Louisiana Central Lumber Co., Stovall Drilling Co. 2.

Wells Drilling

Lincoln Parish—

13-20-3w Barrett, Buckner et al 1.
28-20-4w Hedgpeth, McCaldin et al 1.

Morehouse Parish—

Rigs

17-20- 5 Spyker, Humphreys Carbon Co. 1.

Wells Drilling

53-20- 4 Southern, Amalgamated Oil Co. 2.
15-20- 5 Eubanks, Feazel, W. C., 1.
20-20- 5 Erwin, Carson Carbon Co. 2.
8-19- 5 Fee, Ladel et al 21.
30-20- 5 White, Ladel et al 2.
34-20- 5 Snyder, Natural Gas Producing Co. 4.
8-20- 5 Spyker, Southern Carbon Co. 12.

Shut Down

26-20- 5 Perry, McKenzie et al 1.
32-19- 6 Chess Wymond, Richland Oil & Gas Co. 1.

Rigs

Ouachita Parish—

4-18- 5 Fee, J. M. Huber 5.
21-19- 5 Fee, Southern Carbon Co. 34.
5-19- 5 Fee, Southern Carbon Co. 35.
2-19- 5 Ladel, The Texas Co. 1.
36-20- 4 Cole, United O. & N. G. Co. 2.
4-18- 5 Fee, West Virginia Oil & Gas Co. 4.

Wells Drilling

3-18- 5 West Virginia Timber Co., Atlas Oil Co. 2.
4-19- 5 Lieber, Central Carbon Co. 2.
6-19- 5 Fee, Cosmos Carbon Co. 1.
30-19- 5 Fee, Ladel et al 25.
18-19- 5 Collins, Oil Field Exploration Co. 1.
28-19- 5 Gladney, Palmer Corp. 2.
4-19- 5 Lieber, Palmer Corp. 1.
21-19- 5 Fee, Southern Carbon Co. 31, 33.
15-19- 5 Fee, Southern Carbon Co. 32.
8-19- 5 Perry, Standard Carbon Co. 1.
32-19- 5 Vinson, Standard Carbon Co. 2.

Shut Down

54-17- 3 Dixie Lumber Co., Haynes et al 1.
36-20- 4 Cole, United O. & N. G. Co. 1.
7-20- 7 Michim, Ziegen et al 1.

Rigs

Union Parish—

18-23- 1 Templeton, Palmer, J. F., 1.

Wells Drilling

15-23-1w Frost Johnson Lumber Co., Allison, R. E., 1.
34-23-1w Security Trust, Gulf Refining Co. 2.
7-23-1e Frost Johnson Lumber Co., Love et al 1.
2-23-3w Smith, Neddo Petroleum Invincible Oil Corp. 1.

Shut Down

25-21-3w Heard, Cargile et al 1.
17-23-1e Frost Johnson Lumber Co., Davidson & Palmer 1.
35-22-2w Pryor estate, Johnson et al 1.
17-23-1e Clark, Union Parish Drilling Co. 1.

Wells Drilling

West Carroll Parish—

8-21-10 Fiske, Arkansas Fuel Oil Co. 1.
23-23-10 Main Wagon Co., Orion Oil Co. 1.

Rigs, 8; wells drilling, 34; total, 42.

COLUMBIA COUNTY, ARKANSAS

Rigs

23-14-20 Jackson, Arkansas Osage Oil Corp. 2.
36-15-20 Weaver, Atlantic Oil Prod. Co. 2.
36-15-20 L. Rinehart, Magnolia Pet. Co. 1.
13-15-20 Adkins, Shaffer Oil & Refg. Co. 8-1.

Wells Drilling

2-18-22 Baker-Joiner, Amerada Pet. Corp. 1
12-17-22 Ray-Fullenweider, Arkoll Co. 1.
14-16-20 Murphy, Atlantic Oil Prod. Co. 5.
36-15-20 W. Jones, Gulf Refg. Co. 2.
25-15-20 Hammond, Magnolia Pet. Co. 1.
22-18-22 Barge, Neibert et al 1.

Shut Down

22-18-20 Robinson, Brown et al 1.
3-16-21 Fullenweider, DeSoto Hickman 1.
13-15-20 Smart, Hickman et al 2.
30-19-18 Hays, Hosey McDonald 1.
18-17-22 Sorrells, Johnson et al 1.
20-16-18 Emerson, Russell & Kent 1.
35-18-18 Duffer, Smith & Compton 1.

Rigs, 4; wells drilling, 14; total, 18.

NEVADA COUNTY

Rigs

15-14-21 Blecke, Amee et al 1.
36-10-23 McCain, Arkrado Oil Co. 1.
10-14-21 Womack, Smitherman-McDonald 4.

Shut Down

12-15-22 Perry, Burnham et al 1.
27-14-21 Johnson, Dee et al, 1.
32-11-21 Grayson, Dudley et al 1.
11-12-23 Eaves, Edwards & Anderson 1.
11-13-21 White, Kenark Oil Co. 2.
10-12-20 Henry, Prescott Oil Co. 2.
16-14-21 Butcher, Steele & Sandlin 1.
1-10-23 Suckle, Wiseman et al 1.
9-13-20 Moore & Martin, Wooten et al 1.
10-14-21 Womack, Zing et al 1.

Arkansas Wildcats

Rigs

36-10-20 L. Rinehart, Magnolia Pet. Co. 1.
13-15-20 Adkins, Shaffer Oil & Refg. Co. 8-2.
8- 4-12 Meek, Hill & Arnold 1.
3-20-24 Red River Co., Ken-Saw Pet. Co. 1.
22-14-26 Gillespie, Munn Oil & Gas Co. 1.

Wells Drilling

1-15-15 Childress, Arkansas Fuel Oil Co. 2.
22- 9-10 Plumer, Markle Syndicate 1.
10-13- 6 Karnes, Graves et al 1.
21-14- 7 Spencer, Ratcliff et al 1.
36-12-27 Adams, Simmons, G. W. Trustee 1.

Shut Down

4-16-17 Fee, Spoonse et al 1.
26-16-13 Freeman-Smith, Harris & Bickley 1.
18-11-11 Word, Stark & O'Mara 1.
7-19-19 Emerson, Russell & Kent 1.
35-18-19 Duffer, Smith & Compton 1.
33- 8-15 Matlock & Riggs, Conway et al 1.
12-13- 6 Trotter, King & Wilson 1.
22-11- 7 Graves, Monticello Ridge Oil Co. 1.
5-13- 8 Harris, Rhodes et al 1.
23-13- 6 Fee, Stenke et al 1.
24-11-25 King, Columbia Hope Oil Co. 2
12-12-27 Spates, Johnson et al 1.
17-11-35 Nichols, Myers et al 1.
17-12-23 Yates, Orr et al 1.
7- 3-10 Hinsley, DeCou Oil Co. 1.
25-17-24 Renick, Wilcox et al 1.
15-13-29 Goodrun Tbr. Co., Gaines et al 1.
2-13-21 Allen, Grote et al 1.
10-11-21 Hawkins, Johnson et al 1.
29-13-20 Toland Taylor 1.
32-11-32 Ludlow, Sullivan Oil & Gas Co. 1.
33-14-28 Thompson Kress A. G. 1

Rigs, 6; wells drilling, 28; total, 34.

WYOMING FIELDS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy ..	0	0	0	0	0	5	5
Salt Creek ..	45	7,668	0	0	76	126	202
Lance Creek ..	2	2,040	0	0	0	3	3
Warm Spgs..	1	100	0	0	5	18	23
Big Horn Basin	0	0	0	0	5	17	22
Lost Soldier .	1	0	0	1	10	44	54
Rock River .	1	175	0	0	1	21	22
Fremont Co. .	1	0	0	1	2	18	20
Mule Creek ..	0	0	0	0	2	1	3
Osage	1	20	0	0	8	10	18
Natrona	0	0	0	0	1	17	18
Lincoln Co. ..	0	0	0	0	3	10	13
Baxter Basin.	1	0	1	0	2	13	15
Miscellaneous.	1	0	0	1	5	32	37
Total June	54	10,003	1	3	118	336	454
Total May	57	15,711	0	1	97	306	403
Difference.	3	5,708	1	2	21	30	51

MONTANA

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek ...	0	0	0	0	1	21	22
Sunburst	15	585	6	0	25	35	60
Miscellaneos..	1	0	0	1	5	98	103
Total June	16	585	6	1	31	154	185
Total May.	12	6,960	2	1	22	156	178
Difference..	4	6,375	4	0	9	2	7

COLORADO

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June ...	0	0	0	0	11	36	47
All of State for May ...	0	0	0	0	11	26	37
Difference ..	..	.....	..	..	..	10	10

UTAH

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June....	0	0	0	0	1	29	30
All of State for May ...	1	0	1	0	1	25	26
Difference..	1	.....	1	..	..	4	4

NEW MEXICO

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
All of State for June ...	3	600	1	0	3	10	13
All of State for May ...	2	1,047	0	0	0	6	6
Difference..	1	447	1	..	3	4	7

BIG MUDDY

Shut Down

8-32-76 Humphreys, Mutual Oil Co. 38.
2-32-76 Fenix, Mutual Oil Co. 4.
8-33-76 Carey, Texas Production Co. 32.

4-32-77 Big Bear Oil Co. 1.
15-33-76 Whiteside, Mutual Oil Co. 3.
Wells drilling, 5.

SALT CREEK

Rigs

26-40-79 NW¼, Wyoming Associated 8-AX.
30-40-78 SW¼, Wyoming Associated 21-A.
26-40-79 NW¼, Wyoming Associated 21-A.
26-40-79 SW¼, Wyoming Associated 19-A.
34-39-78 SW¼, Mammoth Oil Co. 302.
34-39-78 NW¼, Mammoth Oil Co. 20b.
28-39-78 NW¼, Mammoth Oil Co. 204
33-39-78 NE¼ Mammoth Oil Co. 405.
28-39-78 SE¼ Mammoth Oil Co. 406.
13-39-78 SE¼ Bessemer Oil Co. 2-AX, 13-AX.
13-39-78 SE¼ Blackstone Salt Creek F-4.
11-39-79 NE¼ Kasoming Oil B-11, B-4.
17-39-78 SE¼ Marine Oil Co. 2.
2-39-79 SE¼ Sinclair-Wyoming 11.
10-40-79 SE¼, Empire State Oil 24-A.
2-39-79 SW¼, Mutual Oil 12-A, 34-A.
11-39-79 SW¼ E. T. Williams 2-A.
13-38-78 SW¼ Wyo. Teapot Oil Co. 1.
16-39-78 NE¼, Nicholayson et al 1.
4-39-78 SW¼, Western States 21-A.
10-38-78 NW¼ Mammoth Oil 202.
19-40-78 NE¼, North Oil Co. 18-A.
36-40-79 SE¼ Midwest & Wyo. Asso. 28-A.
25-40-79 NE¼ Midwest & Wyo. Asso. 13-A.
7-39-78 Tract E, Ohio Oil 3.
25-40-79 SW¼, Wyo. Oil Fields 10-A.
23-40-79 NW¼, Wyo. Oil Fields 34-X.
30-40-78 NW¼, Wyo. Asso. 18-AX.
24-40-79 SE¼ Wyo. Asso. 15-A.
14-40-79 NW¼, Wyo. Asso. 34-A.
27-40-79 NE¼, Wyo. Asso. 11-AX.
2-39-79 NE¼, Wyo. Asso. 4-A.
26-40-79 SE¼, Wyo. Asso. 19-AX.
23-40-79 NE¼, Wyo. Asso. 22-A.
24-40-79 NW¼, Wyo. Asso. 34-A.
14-40-79 SE¼, Wyo. Asso. 4-A.
24-40-79 SE¼, Wyo. Asso. 18-A.
13-40-79 NE¼, Wyo. Asso. 33-X.
2-39-79 NW¼, Salt Creek Con. 19-AS.
3-39-79 NE¼, Salt Creek Con. 35-A.
23-39-79 NE¼, Salt Creek Con. 15-A.
34-40-79, SE¼, Salt Creek Con. 33-AX.
2-39-79 NW¼, Salt Creek Con. 19-AS.
3-39-79 NE¼, Salt Creek Con. 35-A.
3-39-79 NE¼, Salt Creek Con. 15-A.
34-40-79 SE¼, Salt Creek Con. 33-A.
31-40-78 NW¼, Salt Creek Con. 30-A.
11-39-79 NW¼, Salt Creek Con. 3-A.
18-40-78 SW¼, Salt Creek Con. 22-A.
3-39-79 SE¼, Salt Creek Con. 3-A.
3-39-79 NE¼, Salt Creek Con. 4-AX.
11-40-79 NE¼, Mountain & Gulf, 33-A.
6-39-78 NW¼, Mountain & Gulf 29-A.
13-40-79 SE¼, Mountain & Gulf 22-A.
27-40-79 SE¼, Midwest Oil 24-A.
23-40-79 SW¼, Midwest Oil 11-A.
26-40-79 SE¼, Midwest Oil 8-A.
25-40-79 SW¼, Midwest Oil 16-A.
11-40-79 SE¼, Midwest Oil 3-A.
14-40-79 NE¼, Midwest Oil 34-A.
22-40-79 NE¼, Midwest Oil 10-A.
1-39-79 NE¼, Midwest Oil 12-A.
35-40-79 NE¼, Midwest Oil 34-A.
35-40-79 SW¼, Midwest Oil 34-A.
18-39-78 NW¼, Producers & Refiners D 1.
17-39-78 SE¼, Marine Oil 7.
32-40-78 SE¼, Kinney Coastal 30-A.
5-39-78 NW¼, Carter Oil Co., D-8, D-7.
17-39-78 NE¼, Carter Oil Co. P-12.
32-40-78 SW¼, Mtual Oil 29-A.
1-39-79 SE¼, Mutual Oil 29-A.
18-40-78 SW¼, Wyokans Oil Syndicate 3.
18-40-78 SW¼, Wyokans Oil Syndicate 4.
20-39-78 SW¼, Marine Oil T-5.

Wells Drilling

12-39-79 E½, Ohio Oil 23.
1-39-79 Dain 9, Ohio Oil 15.
1-39-79 Dain 9, Ohio Oil 16.
12-39-79 Castle Rock 1, Ohio Oil 9.
13-39-79 Tract O, Ohio Oil 5.
17-39-78 Tract O, Ohio Oil 2.
20-39-78 Tract E T, Ohio Oil 6
27-40-79 Columbia 2, Ohio Oil 12.
26-40-79 NE¼, Wyo. Oil Fields 1-A.
24-40-79 SE¼, Wyo. Oil Fields 19-AX.
34-40-79 NW¼, Wyo. Asso. 24-AX.
35-40-79 SE¼, Wyo. Asso. 29-AX.
15-40-79 NE¼, Wyo. Asso. 13-A.
14-40-79 SW¼, Wyo. Asso. 4-A.
15-40-79 SE¼, Wyo. Asso. 1-AX.
1-39-79 NW¼, Wyo. Asso. 15-A.
3-39-79 NE¼, Salt Creek Con. 30-AS.
27-40-79 SW¼, Salt Creek Con. 36-A.
31-40-78 SW¼, Salt Creek Con. 4-A.
31-40-78 NW¼, Salt Creek Con. 24-A.
3-39-79 NE¼, Salt Creek Con. 4-AX.
31-40-79 NW¼, Salt Creek Con. 15-A.
18-40-78 NW¼, Salt Creek Con. 34-A.
2-39-79 NW¼, Salt Creek Con. 22-X.
12-40-79 SE¼, Mountain & Gulf 5-A.
27-40-79 SE¼, Midwest Oil 18-A.
34-40-79 NE¼, Midwest Oil 6-A, 1-A.
27-40-79 SE¼, Midwest Oil 31-AX.
11-40-79 SW¼, Midwest Oil 1-AX.
11-40-79 SE¼, Midwest Oil 4-A.
27-40-79 NE¼, Midwest Oil 20-A.
15-40-79 SE¼, Midwest Oil 35-A.
24-40-79 SW¼, Midwest Oil 24-A.
27-40-79 SE¼, Midwest Oil 13-A.
24-40-79 NE¼, Midwest Oil 19-A.
36-40-79 SE¼, Midwest Wyo. Asso. 3-A
25-40-79 NE¼, Midwest Wyo. Asso. 18-AX.
25-40-79 SE¼, Midwest Wyo. Asso. 15-A.
36-40-79 NE¼, Midwest Wyo. Asso. 36-A.
36-40-79 SE¼, Midwest Wyo. Asso. 18-A.
36-40-79 NW¼, Midwest Wyo. Asso. 33-A
36-40-79 NE¼, Midwest Wyo. Asso. 32-A
36-40-79 SW¼, Midwest Wyo. Asso. 23-A.
19-40-79 NW¼, Utah Oil & Ref. 3-A.
7-39-78 NE¼, Kasoming E-2.
30-40-78 SE¼, Producers & Refiners 4 & 5.
29-40-78 SW¼, Producers & Refiners 3.
15-40-79 SE¼, Producers & Refiners 9.
18-39-78 NW¼, Producers & Refiners 1.
19-40-78 NW¼, Producers & Refiners F-3.
22-40-79 NW¼, E. T. Williams 4-A.
19-40-78 NW¼, E. T. Williams 4-A.
5-39-78 SE¼, Marine Oil Co. CR-3.
20-39-78 SW¼, Marine Oil Co. T-6, T-7.
34-40-78 SE¼, Kinney Coastal 26-A.
5-39-78 NW¼, Western States 21-A.
19-40-78 SE¼, Cont. Prod. C-2, N-6.
19-40-78 NE¼, Cont. Prod. B-3.
5-39-78 SE¼, Carter Oil D-6.
5-39-78 SW¼, Carter Oil R-9.
5-39-78 NW¼, Carter Oil D-10.
17-39-78 NE¼, Carter Oil P-11.
2-39-79 SE¼ Sinclair Wyoming 13.
34-40-79 SW¼, Mutual Oil 35-A.
10-39-79 NE¼, Mutual Oil 26-A.
8-39-78 NW¼, Mutual Oil 4-A.
32-40-78 SW¼, Mutual Oil 33-A, 34-A.
2-39-79 SW¼, Mutual Oil 1-A.
6-39-78 SW¼, Staley Syndicate 10.
20-39-78 SE¼, Mammoth Oil Co. 409, 410.
2-39-79 NW¼, Salt Creek Con. 19-A.
1-39-79 NE¼, Midwest Oil Co. 31-A.
25-40-79 NW¼, Midwest Wyo. Asso. 33-A.
11-40-79 NW¼, Midwest Wyo. 13-A.
25-40-79 SE¼, Midwest Wyo. Asso. 7-A.
20-39-78 NW¼, Producers & Refiners B-13.
19-40-78 SE¼, Cont. Prod. C-2.
30-40-78 NE¼, Bonfils Oil Co. 30-A.
22-40-79 NE¼, Midwest Oil 20-A, 26-A, 30-A
30-40-78 SE¼, Wyo. Asso. 5-A.
30-40-78 SE¼, Wyo. Asso. 11-A.
30-40-78 SE¼, Wyo. Asso. 16-A.
22-40-79 NW¼, Kasoming Oil Co. B-28.
3-39-79 NW¼, Salt Creek Con. 25-A.
14-39-79 NE¼, Kasoming Oil Co. 3.
13-39-79 Tract O, Ohio Oil 4.
22-40-79 NW¼, E. T. Williams 23-A.
29-40-78 SE¼, Cont. Prod. S-4.
5-39-78 NW¼, Carter Oil Co. D-9.
7-39-78 SE¼, Mutual 2 and 1-DD.
10-40-79 SE¼, Empire State 25-A.
12-40-79 NE¼, Empire State 32-A.
34-40-79 SE¼, Wyo. Oil Fields 36-A.
30-40-78 SW¼, Wyo. Asso. 22-A.
13-40-78 SE¼, Mountain & Gulf 14-A.
6-39-78 SW¼, Mountain & Gulf 8-AX.
7-39-78 SE¼, Chappell Oil Co. 2, 3.
7-39-78 SE¼, Chappell Oil Co. 1-D.

Shut Down

19-39-78 NW¼, Cont. Prod. R-3.
18-40-78 SW¼, Cont. Prod. W-1.
28-40-79 SE¼, J. C. Smith S-1.
2-30-79 NW¼, Midwest Oil 23-X.
29-39-78 NE¼, Mammonth Oil Co. 108.
28-39-78 NE¼, Mammoth Oil Co. 101-A.
10-38-78 NE¼, Mammoth Oil Co. 101,
21-39-78 SW¼, Mammoth Oil Co. 304.
28-39-78 SW¼, Mammoth Oil Co. 302.
28-39-78 NW¼, Mammoth Oil Co. 205.
4-38-78 NE¼, Mammoth Oil Co. 101.
23-39-79 SE¼, Evans Oil Co. 1.
29-40-78 NW¼, Omaha Lusk Oil 1.
28-40-78 SW¼, Jupiter Oil 27-A.
10-39-79 NW¼, Hardendorf et al 1.
35-39-78 SW¼, Teapot Dome Synd. 15-A.
2-38-78 SE¼, Teapot Dome Syndicate 34-A.
2-38-78 NE¼, Teapot Dome Syndicate.
24-39-79 NE¼, Mutual Oil Co. 22-AS.
Rigs, 76; wells drilling, 126; total, 202.

LANCE CREEK

Wells Drilling

28-35-65 NE¼ Buck Creek Oil 6.
b-36-65 Thompson Ohio Oil 1.
East Field Clark Producing Co. 1.
Wells drilling, 3.

WARM SPRINGS, GRASS CREEK, ETC.

Rigs

17-46-98 Washakie, Ohio Oil 1.
23-44-93 Fiavin, Ohio Oil 1.
5-47-90 Heltzer, Ohio Oil 1.
7-46-98 Washakie 6, Ohio Oil 1.
Gebo Dome Utah Oil & Gas 1.

Wells Drilling

26-46-100 NE¼, Producers & Refiners 1.
35-43- 91 Black Mt., Utah Oil & R. 2.
11-45- 97 SE¼, Midwest Refining 1.
31-48- 90 Broome, Ohio Oil 1.
18-46- 98 Washakie, Ohio Oil 4.
20-46- 98 Milliron, Ohio Oil 68.
18-45- 98 Wiley, Ohio Oil 19.
17-42- 95 Markham & Woods.

Shut Down

19-46-98 Ridgley, Midwest Ref. 19-A.
12-45-97 Midwest Refining Co.
27-46-98 Rankin, Dickey Oil Co. 1.
8-46- 98 NW¼, Grass Creek Prod. 1.
17-46-98 NW¼, Tunadore Oil Co.
14-44-98 NW¼, Phoebus Oil 1.
16-46-93 Curtis Oil Co. 1.
27-46-98 Columbus Oil 1.
22-48-91 SW¼, Olympus Oil Co. 1.
3-42-93 NE¼, Union Oil Co. of Cal. 2.
Rigs, 5; wells drilling, 18; total, 23.

BIG HORN BASIN

Rigs

23-56-97 Howell, Occidental Oil 1.
10-54-95 West Land Oil 1.
Crystal Creek, Penn. Kentucky Oil Co.
20-53-101 Guiterman et al 1.
11-49-102 T. & Clark.

Wells Drilling

3-55- 97 Royalty Holding Co. 1.
2-56- 97 Jones, Allen Oil Co. 1.
33-56- 97 Cross, Ohio Oil 1.
30-56- 97 Producers & Refiners 1.
26-57- 95 Trans-Ark. Oil Co. 1.
8-51-100 Sonnérs, Ohio Oil Co. 1.
35-33-100 Union Oil 1.
30-58- 99 Elk, Midwest Refining 16.
4-50-100 Oregon Basin, Flinn & Ache.
21-53-101 Cody Oil & Gas Co.

Shut Down

32-58- 99 Thompson-Elk Basin Oil Co. 1.
31-48-100 SW¼, Midwest Refining 1.
3-56- 97 Griffith, Allen Oil 1.
25-58-100 Beck Petroleum 1.
17-46- 91 Frontier Oil & Gas Co. 1.
16-47-100 Big Horn Dev. Co. 1.
21-53-101 Pittsburgh & Southwestern.
Rigs, 5; wells drilling, 17; total, 22.

LOST SOLDIER AND CARBON COUNTY

Rigs

11-26-90 Kasoming Oil 4-B, 1-C.
22-26-87 Govt. land, Sand Hills Oil 1.
36-25-89 NE¼, Producers and Refiners 2.
16-25-86 NW¼, General Petroleum 4.
31-25-86 Govt. land, General Pet. 3, 4.
10-26-90 U. S. Petroleum.
8-25-86 Govt., General Petroleum 1.
24-26-87 Producers & Refiners 20.

Wells Drilling

2-26-90 Utah Oil & Refining 3.
35-25-88 M. M. Armstrong 1.
14-25-89 Govt. land, Prod. & Ref. 1.
1-23-89 Producers & Refiners 1.
7-26-89 Producers & Refiners 3, 4.
33-26-88 SE¼, Producers & Refiners 2.
25-26-89 SE¼, Hughes Royalty 1.
34-27-90 Annabelle Wyo. Oil Co. 1.
25-26-89 Producers & Refiners 1.
25-26-88 Kasoming D-2.
34-26-88 SE¼, Kasoming Oil C-2.
26-26-88 SE¼, Kasoming Oil Co. 1.
35-26-88 SE¼, Hatfield Oil 1.
11-26-90 Kasoming 49-A, 27-A, 1-A.
27-26-87 Producers & Refiners 23.
25-26-87 Producers & Refiners 10.

Shut Down

2-26-90 SE¼, Producers & Refiners 1.
12-26-90 Pexas Production 1.
24-26-87 Producers & Refiners 30.
25-36-86 Producers & Refiners 22.
1-25-88 NE¼, M. & S. Synd. 1.
11-26-87 Emery Synd. 1.
2-25-87 Govt. land, Gen. Pet. 1.
16-25-86 Govt. land, Gent. Pet. 3.
3-25-87 Govt. land, Gen. Pet. 1.
31-26-86 Govt. land, Gen. Pet. 1.
28-26-88 Govt. land, Columbia Pet. 1.
16-26-89 U. S. Petroleum.
25-26-89 Govt. land, Commonwealth Pet.
14-26-90 NW¼, Bair Oil 3.
25-26-89 SW¼, Bair Oil F-1.
9-26-90 Major Oil Co. 1.
26-26-88 Portland Wyoming 1.
9-25-86 SE¼, Sand Hills Oil 1, 2.
29-26-87 Producers & Refiners 1.
23-26-87 SE¼, Marvin Oil Co. 1.
22-26-90 NE¼, Producers & Refiners 2.
4-25-88 Producers & Refiners 2.
35-26-88 Producers & Refiners 2.
33-26-88 Producers & Refiners 3.
Rigs, 10; wells drilling, 44; total, 54.

ROCK RIVER

Rigs

Rex Lake Dome, Laramie Oil & Dev. 1

Wells Drilling

34-20-78 Ohio Oil 9.
12-19-78 Prairie Dog Oil & Gas 1.
32-16-74 Spindletop Oil 1.
11-19-78 H. & C., Ohio Oil 4.
23-16-77 U. P., Ohio Oil.
36-21-78 NW¼, Southwest Petroleum 1.
14-15-75 SE¼, Wyo. Hollow Basin Oil Co. 1
26-21-79 SW¼, Southwest Petroleum 2.
25-21-79 SE¼, Southwestern Petroleum 1.
26-16-77 Cougilin Permit, Ohio Oil 2.
32-16-74 Govt., G. A. Briggs 1.
20-21-80 U. P. Prod. & Ref. 1.
16-21-80 NW¼, Producers & Refiners 1.
34-23-79 NE¼, Central Pipe Line.

Shut Down

27-16-77 U. P., Ohio Oil 1.
4-19-78 Hutton Lake Oil.
18-15-75 Apex Refining Co.
18-15-75 Petroleum Oil Fields Co.
12-20-77 Govt. land, McLaughlin et al.
10-18-77 Govt. land, Carbon Oil Co.
32-21-78 Govt. land, Ross et al.
Rigs,, 1; wells drilling, 21; total, 22.

FREMONT COUNTY

Rigs

23-32-95 Sand Draw, Producers & Refiners 1.
Sage Creek, Washakie Synd. 1.

Wells Drilling

35-43-91 Utah Oil & Refining.
25-27-93 American Workers Oil.
23-32-95 Producers & Refiners Corp.
26-37-74 Wyoming Syndicate 1.
15- 6- 2 SW¼, Union Oil Co. 13.
27-34-95 Dutton Creek, Texas Prod. 3.
18-27-95 SW¼, Sage Creek Pet.
15-34-90 Ward Oil Co. 1.
34- 6- 3 Kinney Coastal 2.
15-32-95 Sand Draw, P. & R. 3.

Shut Down

9-32-95 Sand Draw, Prod. & Ref.
6- 6- 2 Union Oil Cal.
29-27-95 Fremont Consolidated Pet.
5-32-94 McLennan & Ketch.
26- 5- 2 Connelly O. & Land Co. 1.
Derby Dome Derby Dome Wyo. 8 & 9.
14-35- 2 Sand Draw, Prod. & Ref. 3.
Maverick Springs Maverick Spgs. Dev. 1.
Rigs, 2; wells drilling, 18; total, 20.

MULE CREEK

Wells Drilling

36-41-61 Western Dakota Oil Co. 1.
30-39-60 Western States O. & L. 2.
Wells drilling, 2.

OSAGE

Rigs

31-27-63 West Royalty Oil Co. 1.
Fawcett Ranch Manlove et al 1.
31-26-62 Clark et al.
30-26-63 Glenn Oil Co.
17-26-63 LaFleiche Oil Co.
19-26-63 Sinclair Wyoming.
31-26-63 Lusk Royalties 1.
20-26-63 Sankey & Stahl 3.

Wells Drilling

5-26-63 Fletcher Brothers.
20-26-63 Byron Gardner 3.
17-26-63 Osage Trust 9.
31-26-63 Tom Don.
18-26-63 Wyoming Hi Test Oil.
17-26-63 LaFleiche Oil 5.

Shut Down

11-25-64 Frederick Oil & Gas.
6-26-63 Osage Trust Co.
21-25-63 Bachelor Oil Co.
8-25-63 Griffith Oil Co.
Rigs, 8; wells drilling, 10; total, 18.

NATRONA COUNTY

Rigs

28-11-81 Tisdale, Midwest Refining Co.

Wells Drilling

7-36-81 Columbus Oil Co. 1.
15-34-87 NE¼, Mutual Oil Co. 1.
32-37-81 California Oil Co. 1.
36-37-82 SW¼, Midwest Refining 1.
31-40-80 Comet Syndicate 1.
Poison Spider Fargo Oil Co. 24, 25 & 26.
10-36-85 Boone Dome, New York Oil.
12-32-83 New York Oil 10.
9-35-85 New York Oil 4.
20-37-82 NW¼, Wyland Snydicate 1.
35-35-84 Alaska Development Co. 3.

Shut Down

2-34-84 California Oil Co. 1.
12-34-84 Cheney et al.
Lox Dome Lox Syndicate.
9-41-80 Pat O'Connor.
Rigs, 1; wells drilling, 17; Total, 18.

LINCOLN COUNTY

Rigs

31-28-113 Magie & Horn, Tip-Top Syndicate
35-27-113 Superior Oil & Gas.
1-28-113 Midwest Refining Co.

Wells Drilling

Corder Ranch Beaver Oil Co. 1.
30-14-118 Highland Oil & Gas.
Labarge Dome Newton Syndicate 1.
35-27-113 Myotah Oil & Gas Co.

Shut Down

Afton Dist. Wyoming Idaho Oil 1.
11-21-115 Waterfall Dist., Gulf Coast Oil.
28-28-112 George Donnelly et al.
1-28-114 Lackey et al.
Big Piney Nippon O.l Co. 1.
14-21-117 Herman Oil Co.
Rigs, 3; wells drilling, 10; total, 13.

BAXTER BASIN

Rigs

27-17-104 Montacal Oil 1.
7-17-103 Petrogras Oil 1.

Wells Drilling

36-17-104 NW¼, Producers & Refiners 1.

Shut Down

10-16-104 SE¼ Midwest Refining 29.
10-16-104 NW¼, Midwest Refining 36.
2-17-104 NE¼, Midwest Refining 1.
36-18-104 NE¼, Midwest Refining 1-X.
25-18-104 Midwest Refining 29.
30-18-104 Midwest Refining 6-AX.
23-16-104 A. J. P., Ohio Oil 1.
14-17-104 Hay, Ohio Oil 1.
24-27-104 SW¼, Montacal Oil 1.
8-16-104 Montacal Oil.
26-17-104 NE¼, Associated Oil.
23-17-104 Associated Oil.
Rigs, 2; wells drilling, 13; total, 15.

MISCELLANEOUS

Rigs

Burris Dome Salt Creek-Montana Giant.
Newcastle Dist. Ferguson et al.
Moorcroft Dist. Fee and Rice.
Little Missouri Union Oil 1.
32-48-63 Wyoming Development 1,

Wells Drilling

17-46-82 Tarrant Syndicate.
20-21-80 Producers & Refiners 1.
Buffalo Dist. Kinney Coastal 1.
20-21-80 Producers & Refiners 3.
16-21-80 Producers & Refiners 1.
28-47-63 Gose Syndicate 1.
Colony Dist. Walther & Bernard.
21-48-82 Carter Oil 3.
8-68-65 Producers & Refiners 1.
17-48-82 Carter Oil 4.
Glendo Dist. Nebraska Syndicate 1.

Shut Down

16-48-82 Carter Oil 1.
Vernon Dome Walter Hargis et al.
Lingle Dist. Matthew Foreman et al.
16-42-79 Atlantic Drilling Co.
Moorcroft Dist. Southwest Oil.
Stronger Ranch Wyoming Illinois Oil Co.
Cottonwood Dome Baker Petroleum.
Wakeman Dist. Mississippi Delta Oil.
17-50-68 Trail Creek Oil.
17-51-65 Houghton Oil.
Barber Ranch Wyoming Hi Gravity Oil.
33-36-78 Turner Oil Co.
Page Dome Crook County, Hover Bros.
Douglas Dist. Ajax Wyoming Oil.
Horse Creek National Oil Co.
7-37-72 Cheyenne River Oil.
26-27-61 Platte Wyoming Oil.
18-39-68 Glendo Oil & Gas.
11-31-71 La Bonte Oil & Gas.
2-25-95 Lost Creek Consolidated.
30-51-68 Shaw & Scott.
Rigs, 5; wells drilling, 32; total, 37.

MONTANA

CAT CREEK

Rigs

12-15-28-NE¼ Schaeffer Oil Co.

Wells Drilling

8-15-29 Mussell Shell V. Oil, Mutual Oil.
12-15-28 California Co.
7-15-29 NW¼, Fifty-Six Petroleum.
12-15-29 Catlett, Mid-Northern Oil.
9-15-27 Peerless Oil 2.
23-14-28 Winnitt, Pacific Oil 1.
1-15-28 Custer Oil & Gas.
28-16-28 Republic Peerless Oil 1.
9-15-29 NE¼, Frantz Corp.
7-15-25 NW¼, Hogan Oil 2.
9-15-29 Mid-Northern Oil.
29-14-29 Flatwillow Oil.
27-15-30 Frantz Corp.

Shut Down

10-15-29 Fifty-Six Petroleum.
22-15-30 A. D. Miller et al.
11-15-30 Helena Cat Creek Oil.
20-15-30 Montacal Oil.
8-15-29 Logan Corp.
15-15-30 Montana Syndicate.
24-15-30 Swartz et al.
11-15-30 Miles City Oil.
Rigs, 1; wells drilling, 21; total, 22.

SUNBURST

Rigs

5-35- 2 Britton, Mid-Northern Oil 2.
7-35- 1 SW¼, Hager Stevenson Oil.
11-35- 2 Stockmans Bank, Ohio Oil 2.
20-32- 2 Garrett, Sunburst Oil & Gas 1.
34-36- 2 Davey, Ohio Oil 9.
25-36- 2 Kaskin, Ohio Oil 1.
30-35- 2 Hecla Oil 1.
20-35- 2 Whitman, Homestake Exp. 1.
4-34- 2 Queen City Oil Co.
22-35- 2 Helmericks, Mutual Oil Co.
7-22- 2 Mutual Oil Co.
20-35- 2 Crumley-McKnight.
4-34- 2 Maughan, Ohio Oil 1.
5-34- 2 Moore, Elliot & Callendar.
4-34- 2 Corey, Whitman Sunburst.
4-34- 2 Corey, Newton & McMurray.
8-34- 2 Falke, Lilley Snow Cap Oil.
5-34- 3 Storme, Shoshone Oil Co. 2.
25-35- 2 B-C-Montana Oil Co.
12-35- 2 Barth, Hager Shiphenson.
3-35- 2 Helgard, Homestake Expt.
26-35- 2 Beaver Montana 2.
21-35- 2 McManus, Hilsa Oil Co.
25-35- 2 McKee, California Co.
30-35- 1 Stannard, Wallace Oil Co.

Wells Drilling

32-36- 2 Roundsley, Sunburst Oil & Gas.
2-35- 2 Whitman, Homestake Expt.
9-35- 3 Bruins, Western Pet. Expo. 4.
24-35- 2 Mae Belle Oil Co.
8-34- 2 Hurley, Bill Thomas Oil & Gas.
22-35- 2 Newman, California Co. 3.
27-35- 2 Lorenzen, Maconia Oil Co. 2.
36-35- 3 State Lease, Featherstone et al.
3-35- 2 Baum, Kolfax Petroleum Co.
30-35- 1 Starmard, Securities Oil 2.
4-35- 2 Baker, Ohio Oil 9.
32-36- 2 Roundsley, Ohio Oil 1.
4-34- 2 Nonum, Ohio Oil 1.
24-35- 2 Zimmerman, F. C. Keane.
21-34- 1 Stockmans Bank, Potlach O. & G.
24-33-1 Shelby Syndicate 1.
28-37-2 McAlpine, Spartan Oil 1.
20-35- 2 Halter, Suburst Prod. 2.

Shut Down

23-33- 1 Webb, Shelby Oil & Gas.
31-35- 1 White, Jones Oil 1.
2-33- 1 Seward, Sunburst Oil 1.
18-32- 4 Beck Petroleum 1.
25-35- 3 Stewart, Campbell Syndicate.
12-34- 1 Peterson, Lucky Forty Oil.
21-35- 2 McGowan Holding & Royalty Oil.
13-35- 3 Campbell, Campbell Syndicate 5.
16- 34- 2 NW¼, Rainbow Oil 2.
31-35- 3 NW¼, Schaeffer Oil 1.
1-34- 2 NE¼, Sunburst Oil & Gas.
12-35- 3 Goderts, Campbell One Synd. 5.
30-35- 5 Larsen, Walter Bright et al.

POWER

Flat Link or Cable Chain Eight Sizes For ⅛" to 16" Pipe

The TRIMO Chain Wrench

is known by engineers everywhere as the most powerful chain wrench. Jaws and handle are drop-forged of selected steel and handle is flat instead of round. Chains are tested for strength. The chain pocket is located in the handle, placing the drawing stress where there is most strength to resist it.

For rugged service, where dependability counts, it pays to play safe. Specify TRIMO Chain Wrenches.

TRIMONT MFG. CO.

Roxbury, Mass.

TRIMO

6859

24-35- 2 Zimmerman, Wells Oil Co.
2-35- 1 Skilton, Sweetgrass Arch.
29-35- 1 Anderson, Sylvester Oil Co.
9-34- 2 Fauck, Snow Cap Oil Co.
Rigs, 25; wells drilling, 35; total, 60.

MONTANA MISCELLANEOUS

Rigs

Livingston Dome Whiteside et al.
Porcupine Dome Stellar Oil & Gas.
Great Falls Dist. Virgelle Oil 1.
24-15-15 Fullerton Oil.
12-10-32 Hibbard Oil.

Wells Drilling

5-11-30 Flynn Brothers.
24- 4-61 Absaroka Oil & Development.
9-10-39 Stellar Oil & Gas.
24- 5- 8 Potter Basin Oil & Gas.
8- 4-23 NE¼, Hoosier Oil Co
28- 8-21 Absaroka Oil Dev.
12-15-28 NE¼, California Co. 5.
Dunn Structure Jamestown Dev
18-1[illegible] 4 Beck Petroleum.
18- 3-23 Securities Prod. 4.
30-14-26 NE¼, Wilson & Fisher 1.
10-14- 2 Moscow Oil Exploration.
30-14-26 Winnett, Shallow Oil Syndicate.
32- 4-16 SE¼, Consolidated Oil & Gas 1.
34- 7-16 NE¼, California Co. 1.
12-36- 5 NE¼, California Co. 1
34-7-16 NE¼,California Co. 1.
12-36- 5 Frazier et al.
29-21-14 Middle States Oil 1.
9-12-14 Oil Springs Dev. 1.
29-11-23 Montana Pioneer Oil 2.
25- 7-24 Penn Oil & Development.
22-25-50 Butler Oil & Gas.
24-20-12 Continental Prod. 1.
17- 3-19 Snyder, Mid-Northern Oil 1.
27-20- 3 Arrow Creek Oil.
22-23-12 Hager, Stevenson 1.
McGinnis Dome Sherrard Syndicate 1.
18-23-21 Lake, Carter Oil 1.
2-28- 3 NE¼, Dry Fork Oil 1.
Baley Dome Montana Development Co. 1.
Muddy Creek Mountaineer Oil 1.
14-18- 4 Eliakin Oil 1.
14-11-24 Devils Basin, Fifty-Six Pet.
Antelope Point Hard Times Oil.
2-26- 6 Marion Edwards et al.
29-14-29 Whaley et al.
7- 4-22 Security Petroleum 1.
27- 7-13 Harlowtown C. & Gas.
Wilsal Dome Shields Valley Oil.
4-17-20 California Co.
10-13-34 Absaroka Oil & Development.

Shut Down

20-25- 5 Larsen, Walter Bright.
2-26- 6 Edmonds Jones, Walter Bright.
32-22- 3 Rees, Greater, Great Falls.
32-20- 2 Demyer, Drake Oil.
5- 1-31 Grimsted & Brown.
13- 3-23 SW¼, Securities Prod. 4.
21-14-28 Black Hawk Oil.
9-11-24 NW¼, Absaroka Oil & Dev.
21-30- 3 Turner, Fergus Oil & Gas.
22- 2-25 McMennamin et al 1.
30- 7-13 Churchwell et al.
18- 6-24 Minneweyer & Newman.
5- 1-21 Cairncross Oil.
3-12-25 SW¼, Minnesota Flatwillow.
15-27- 7 Kelly Empire Oil.
18-24- 7 Cascade Oil & Gas.
6-13-14 Fulton Oil 1.
26-14-[illegible] NW¼, Jackson Dome Oil.
18- 6-24 NW¼, Yellowstone Pet. Synd.
7-27- 1 Circle Oil 1.
9-11-24 Tri City Oil.
18-26-26 Walker Brothers.
25-17-22 Cosmo Oil 1.
12-11-23 Armsted Oil.
Devils Basin Alberta Block Coal Co.
Big Coulee Midland Petroleum.
12-18-13 Arrow Creek Pet.
28-13-25 Wayne Petroleum.
3-18-20 Big Bud Oil.
26- 7-12 Elk Petroleum Syndicate.
35- 2- 7 Gladys Belle Oil.
Coalwood Dome Annama Oil.
Hailstone Basin Hailstone Basin Oil.
Devils Basin Montana Central Oil.
Devils Basin Monarch Oil.
30- 5- 8 Portland Syndicate.
32-20- 1 Columbia Oil.
24- 5-17 Unit Oil & Gas.
23- 2- 5 Fox and others.
19-11-23 Montana Pioneer Oil.
23- 3-24 Davis Creek Syndicate.
33-6-28 Beauvois Oil.
12-11-13 Kalispel Syndicate.
13-13-20 Omaha Petroleum.
32- 1-28 Tennessee Montana Oil.
6- 5-25 Grey Eagle Oil.
23-11-24 Success Refining Co.
8-36- 1 Idaho Mont. L.
20-30- 1 A. M. Barringer.
31-15-46 Crow Rock Oil.
6- 6-17 Armstead Oil.
1-10-21 Williams Oil & Gas.
2- 2-26 Clarks Fort Oil.
11- 1- 1 Ruby Ridge Oil.
2- 2-17 Montana Pacific Oil.
10-34-24 Mid-Northern Oil.
Rigs, 5; wells drilling, 98; total, 103.

UTAH MISCELLANEOUS

Rigs

27-41-19 Utah Southern Oil.

Wells Drilling

23-42-17 Govt. Land, Monumental Oil.
Virgin Field Gustamn Oil Co.
Rozal Dist. Leouona Mining & Milling Co.
Rozal Dist. Lake Side Oil Co.
6-14-23 San Juan Development.
34-2s-21 Big Six Oil.
31-40-18 Texas Production 1.
22- 3-24 SW¼, Producers & Refiners 1.
16- 2- 5 State Land, Western Empire Oil.
33-42-17 Govt. Land, Monroe Oil.
6- 2- 6 Ohio Oil 1.
Crescent Dome Crescent Eagle Oil.
31-32-18 Union Oil of Utah.
Diamond Fork Gustaven Oil.

Shut Down

12-19-13 Govt., Utah Oil & Refining.
17- 4- 6 Ute Pet. and Utah Southern.
22-43-22 Govt. Land, Southwest Oil Co. 2.
13-14-9 Castle Dale Oil.
27-16- 4 Producers Oil Co.
Lakeside Dome W. R. Holmes.
Diamond Fork Franco Utah Oil.
25-13- 1 Cache Valley Oil Syndicate.
Box Elder County, Nebeker et al.
2-17- 3 Utah Central Oil.
Moffat Dome Uintah Exploration 1.
Harrisburg Dome Virgin Oil.
Evans Claim Uintah County Oil.
Hill Creek Hill Creek Oil & Refining.
Hill Creek Mutual Oil.
Rigs, 1; wells drilling, 29; total, 30.

COLORADO

Rigs

29-10-65 Willington, American Pet. Co.
2- 9-69 Douglas Oil Co.
12-48-70 Green Mt. Pet. Co.
33- 5-91 Weyand, Texas Co. 1.
9- 4-91 Meyer, Texas Co. 1.
16- 4-91 NE¼, Texas Co. 1.
31- 9-68 Midway Oil & Gas.
10- 2-70 NW¼, Mullen Syndicate.
27- 2-70 Rainbow Oil & Development.
6- 9-68 Union of California 2.
7- 9-68 Union of California.

Wells Drilling

32-31-65 Union Oil of California.
30- 8-68 NW¼, Union Oil of California.
36- 8-62 Estes Park Oil Co.
3-35- 58 Las Animas Syndicate.
22-29-13 Farmington Petroleum Co.
28- 5-91-Se Texas Orid Co.
34- 5-91 Pennie, Texas Production Co.
16- 4-69 State, Midwest Refining Co.
22- 4-92 Iles Dome, Midwest Refining Co.
23-8-104 Peerless Oil Corp.
28- 2-70 Haystack Struct., Sand Hill Oil.
6-9- 68 SW¼, Scott, Union of California.
6- 9-69 NW¼, State, Union of California.
8- 9-68 NE¼, Union of Colorado.
28- 2- 7 Gehring, I. A. Deline.
31- 2-96 White Diver Development.
30-20-63 Eagle Rock Oil.
2-11-33 Gem State Petroleum.
34-17-70 Mutual Oil & Development.
15-21-64 Hall & Allen.
5-26-63 Moody Lake Oil.
25- 5-99 Fik Springs Development.
28- 2-70 Sand Hills Oil.
Pueblo Dist. Chico. Basin Oil & Gas.
24- 9-69 SW¼, Wellington Oil Corp.
25-33-13 J. A. Leidecker et al.
18-20-46 Nee-No She Oil Co.
28- 2-70 Bell, Chio Oil 1.
22-32-13 Love et al.
23-31-65 Colorado Oil.
32-20-63 Salida Oil & Refining.
1-22-60 Jones Point Drilling Co.
6- 9-68 Union of California 3.

Shut Down

28- 3-64 Eman Oil Co.
19- 5-68 Dry Creek Oil & Gas.
35-22-65 San Corlos Oil Co.
Rigs, 11; wells drilling, 36; total, 47.

NEW MEXICO

Rigs

15-23-24 Floreshuin 6.
Rattlesnake Dome South Te. 4.
5-30-13 H. L. Williams 6.

Wells Drilling

3-27-17 SW¼, Producers & Refiners.
17-28-18 SW ¼, Gypsy Oil.
14-29-11 Hubbel, Blumfield.
20-32-13 H. L. Williams 3.
17-31-13 H. L. Williams 4.
8-30-13 H. L. Williams 5.
23-23-13 Roy T. Clapp.

Shut Down

12-29-13 Shiprock Oil.
25-30-12 Hall et al.
14-29-11 Bloomfield, Hubble & Hall.
Rigs, 3; wells drilling, 10; total, 13.

Wells Completed

1-39- 79	Dain 8, Ohio 13	30
12-39- 79	E½, Ohio Oil 22	35
1-39- 79	Dain 9, Ohio Oil 14	100
12-39-79	Castle Rock 2, Ohio Oil 4	60
18-39- 78	Tract 1, Ohio Oil 2	10
14-40- 79	SW¼, Wyo. Asso. 19-AX	40
25-40- 79	SW¼, Wyo. Asso. 29-AX	70
2-39- 79	NE¼, Wyo. Asso. 19-A	130
7-39- 78	SW¼, Salt Creek 11-A	150
11-40- 79	NE¼, Mountain & Gulf 31-A	50
25-40- 79	NW¼, Midwest Oil 27-AX	80
1-39- 79	NW¼, Midwest Oil 14-A	50
2-39- 79	NW¼, Midwest Oil 13-A	1440
22-40-79	NE¼, Midwest Oil 8-AX	100
36-40- 79	SE¼, Midwest Oil Wyo. Asso. 21-A	200
30-40- 78	NW¼, Utah Oil & Ref. 35-A	40
20-39- 78	SW¼, Utah Oil & Ref. T-5	25
5-39- 78	NW¼, Western States 4-A	180
30-40- 78	NE¼, Cont. Prod. Oil Co. B-9	175
8-39- 78	NE¼, Carter Oil H-1	30
8-39- 78	SE¼, Carter Oil P-10	20
18-39- 78	NE¼, Carter Oil H-3	24
2-39- 79	SE¼, Sinclair Wyoming 12	150
19-39- 78	SW¼, Mosher Oil 25	25
1-39-79	SE, Mutual Oil 18-AS	500
1-39-79	SE, Mutual Oil 19-AS	250
2-39-79	SW, Mutual Oil 24-A	500
35-40-79	Wyo. Asso. 34-A	50
23-40-79	NE, Midwest Oil 16-A	249
2-39-79	NE, Wyo. Asso. 34-A	100
24-40-79	NE, Wyo. Asso. 13-A	320
13-40-79	NE, Mt. & Gulf 19-A	175
3-39-79	SE, Salt Creek Con. 21-AX	234
22-40-79	NE, Midwest Oil 9-AX	180
7-39-78	SW, Salt Creek Con. 18-A	200
36-40-79	SE, Midwest Oil & Wyo. Asso. 18-A	146
30-40-78	NW, Utah Oil & Ref. 11-A	25
34-40-79	NW, Midwest Oil 13-A	80
22-40-79	NE, Midwest Oil 26-A	85
7-39-78	NW, Salt Creek Con. 24-A	60
31-40-78	SW, Salt Creek Con. 24-A	510
19-40-78	SW, Midwest Oil 1-A	400
24-40-79	SW, Midwest Oil 24-A	200
24-40-79	NE, Wyo. Asso. 24-A	40
27-40-79	SW, Salt Creek Con. 24-AX	150
4-35-65	Cash 2, Ohio Oil 4	2000
18-25-65	Union Oil of California	40
24-44-98	Western States	100
36-26-98	State Land, Chio 3	gas
2-19-78	Harrison & Cooper, Ohio Oil 9	175
7-28-92	Southwestern Pet. Co.	gas
20-46-63	Bradley & Mane	20
11-17-104	Midwest Oil	dry
35-20-88	Hatfield Oil Co.	gas

Wells completed	54
Production	10003
Dry	1
Gas	3
Gas production	40,000,000

MONTANA

Wells Completed

26-35- 2	Abel, Homestake Explo.	25
9-35- 2	Sonners, Mid-Northern 3	dry
24-35- 2	Zimmerman, Spartan Montana	dry
30-35- 1	Emmons, Dakota Montana 2	25
17-34- 2	De Groate, Shelby Kevin 1	30
16-35- 2	State, C. Beardsley 1.	dry
19-34- 1	Johnson, California Co.	dry
30-35- 1	Stannard, Wallace Oil Co.	25

There are three definite reasons why

"PALMETTO"

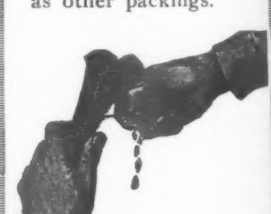
outlasts other packings even under hard conditions:

FIRST:

"Palmetto" is made up in a layer upon layer construction, which gives it great tensile strength.

SECOND:

It has graphite grease lubricant forced hot into each single strand before braiding, and not dipped into lubricant after braiding, as other packings.



THIRD:

The long fiber asbestos of which it is made gives each single strand great tensile strength. Test a strand yourself.

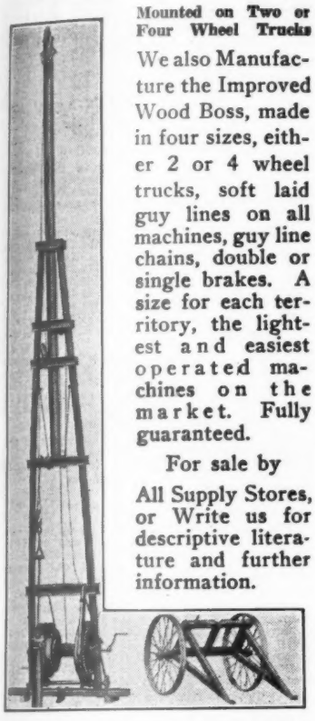
Let us prove "Palmetto's" long life in service with working samples—no charge.

GREENE, TWEED & CO.
Sole Manufacturers
109 Duane St.
NEW YORK

The Iron Boss

Pulling Machine

MAXIMUM STRENGTH
MINIMUM WEIGHT
DOUBLE OR SINGLE BRAKE



Mounted on Two or Four Wheel Trucks

We also Manufacture the Improved Wood Boss, made in four sizes, either 2 or 4 wheel trucks, soft laid guy lines on all machines, guy line chains, double or single brakes. A size for each territory, the lightest and easiest operated machines on the market. Fully guaranteed.

For sale by

All Supply Stores, or Write us for descriptive literature and further information.

The Boss Mfg. & Supply Co.
Van Buren, Indiana, U. S. A.

WESTERN BANK SUPPLY CO.
Manufacturing Stationers
High-Grade Office Furniture
Filing Cabinets—Safes
Log Books—Township Plats—All Standard Forms
Lithographing Embossing
Engraving Printing
"THE HOUSE OF QUALITY"
317 West Main St. OKLAHOMA CITY
4th and Boston TULSA, OKLA.

Capital Abstract & Realty Co.
W. S. Bell L. B. Norton
J. F. Patterson
Okmulgee, Okla.

DAWSON TOWEL SUPPLY
Aprons, Towels, Jackets for Rent
Towel Service for Office $1.50 Mo.
Phone 2185 Tulsa, Okla.

Dickey-Ashby-Fountain Co.
General Insurance
Derricks, Tanks and Contents Insured
1114 Atlas Life Bldg., Tulsa, Okla.

GEO. W. HENRY, Printer
"Better Printing"
Phone O-238
510 S. Elgin Tulsa, Okla.

LAFE SPEER ABSTRACT CO.
General Abstractors
J. A. Boyd, Pres. and Mgr.
11 S. Park St. Sapulpa, Okla.

SAND SPRINGS WATER CO.
Pure Spring Water
Distilled
Phone Osage 700 Tulsa, Okla.

Place your order for Ice with the
TULSA ICE CO.
Phone 12. 4 N. Detroit, Tulsa, Okla.

7-34- 1	Carlson, Dakota Montana		50
5-34- 2	Sweeny, I. M. Foster		250
25-35- 2	Stannard, Wyo.-Mont. Prod. & Ref. 3		30
21-35- 3	McCowan, Malumby		100
13- 3-20	SE, Mid-Northern		dry
19-35- 2	Seabrook, Metzenbaum		50
4-34- 2	Norum, Sweetgrass Oil 5		dry
19-37- 4	Gladys Belle		gas
	Wells completed		16
	Production		585
	Dry		6
	Gas		1
	Gas production		5,000,000

NEW MEXICO
Wells Completed

18-29-16	Navajo Lease, Midwest 8		500
	Rattlesnake Dome, Santa Fe Co.		100
19- 2-102	Associated Oil		dry
	Wells completed		3
	Production		600
	Dry		1
	Gas		0
	Gas production		0

DRILLING NEW TEST ON JACALITOS DOME

LOS ANGELES, Cal., July 5.—The Jacalitos Dome, near Coalinga, on which the Snowolene Oil Co. is rigging up to drill out cement at 3,418 feet in its test well is a plunging anticline lying immediately to the south of the Westside Coalinga Field and Waltham Canyon and is possibly separated from the Coalinga Field by a zone of minor faulting. The structure plunges both ways from just south of the center Section 22-21-15 M. D. B. & M. From the apex of the dome the axis bears northwest and then west through Section 18-21-15, where it plunges into the head of the Jacalitos syncline and southeast through sections 26 and 36 of the same township. The maximum thickness of formations exposed constitutes the Tulare (Paso Robles-upper Pliocene) and Ethegoin) (middle Pliocene). A well located at the apex of the dome would pass through the Jacalitos formation (lower Pliocene) and Santa Margarita formation (upper Miocene) before entering the so-called Vaqueros sandstone (lower Miocene) from which production is secured in the Coalinga Field.

There have been six wells drilled in Section 18 but they cannot be credited with having tested the Jacalitos Dome as they were located where the structure plunges into the Jacalitos syncline, or in the syncline itself. One of these wells, that of the Boychester Oil Co, which is now standing cemented at 2,840 feet in the northeast corner of Section 18-21-15, logs formations which can be correlated with production formations in the Westside Coalinga Field.

Prior to 1923 7 wells had been drilled on the Jacalitos Dome, or its northeast flank, two wells located structurally, the Bohemian Oil Co.'s well in Section 22 and the Azores Oil Co.'s test in Section 26. The former's well actually produced some 37 degrees Baume oil and gas from just below a depth of 3,700 feet and was deepened and reported to have encountered water. However, early methods of identifying and testing oil bearing formations used in these wells cannot be considered a fair test.

The Snowolene Oil Co., operating on a Government prospecting permit, drilled its first well in Section 22-21-15 to a depth of 3,623 feet but the hole was abandoned because a string of 10-inch casing, which was being run in to shut off top water was lost and could not be recovered. It was expected the formation which furnished the oil in the Bohemian well would have been encountered at about 3,770 feet. The Snowolene's present test, which is about 25 feet west of the company's abandoned well, has a little over 350 feet to go. The Snowolene's test was located by Ralph Arnold, geologist, who is enthusiastic over the prospect of developing production in this section.

LANCE CREEK WELL TO GAS

CASPER, Wyo., July 5.—The gas well of the Western States at Lance Creek Field, in Niobrara County is turning to gas and traps are being placed to separate the crude from the gas. The flow is making about 10,000,000 feet of gas and 150 bbls. of oil daily.

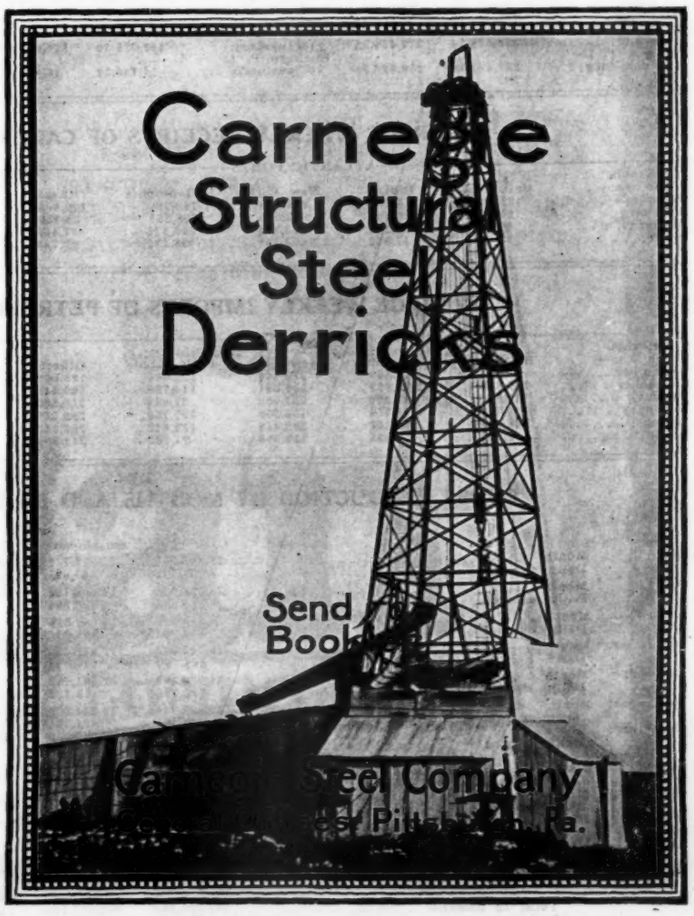
Services Available for the Oil and Gas Industry as—

CONSULTING ENGINEERS in all matters pertaining to:
Pipe Line Transportation of Petroleum and Natural Gas.
Recovery of Gasoline by Absorption or Compression.
Compressing and Booster Plants.
Gas Engines and Compressors.

CONSTRUCTING ENGINEERS and CONTRACTORS, specializing in:
Pipe Lines for Gas and Oil.
Compressing and Booster Plants.
Gasoline Recovery Systems, Absorption and Compression.
City and Inter-City Gas Mains.
No Contract too large to complete with satisfaction and dispatch or too far away to handle.

MANUFACTURERS and DISTRIBUTORS of Gas and Oil Specialties, including:
Heat Exchangers.
Gasoline Recovery Equipment.
Compressing and Booster Station Equipment.
Reeves Vertical Gas Engines and Compressors.
Hope Biplane Compressor Valves.
Hope River Clamps and Reinforced Joints.

Consulting and Contracting Engineers in Natural Gas and Oil
HOPE Engineering & Supply Co.
Mt. Vernon, Ohio, U.S.A.
Branches: Pittsburgh, Kansas, Tulsa, Ohio, Calgary, Can.



Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE REPORT FOR MAY

Runs

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,596,000	116,000
Gulf Pipe Line Co.	1,035,249	33,395
Texas P. L. Co.	469,448	15,143
Magnolia Petroleum Co.	1,152,274	37,170
Empire Pipe Line Co.	868,876	26,093
Cosden Pipe Line Co.	815,635	26,311
*Sinclair Pipe Line Co.	1,240,000	40,000
*Other lines	7,378,000	238,000
Total May	16,495,482	532,112
Total April	15,559,656	518,655
Difference	935,826	13,457

Shipments

	Month	Dy. Av.
*Prairie Pipe Line Co.	3,658,266	118,009
Gulf Pipe Line Co.	1,106,034	35,679
Texas Pipe Line Co.	466,978	15,063
Magnolia Petroleum Co.	1,138,580	36,728
Empire Pipe Line Co.	706,345	22,785
Cosden Pipe Line Co.	813,356	26,237
†Sinclair Pipe Line Co.	1,919,354	61,912
Other lines	7,285,000	235,000
Total May	17,093,913	551,413
Total April	16,435,126	547,841
Difference	658,787	3,572

Stocks

*Prairie Oil & Gas Co.	22,500,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	9,361,019
The Texas Co.	6,937,335
Magnolia Petroleum Co.	8,349,769
Empire Pipe Line Co.	3,097,235
Cosden Pipe Line Co.	2,953,548
*Sinclair Crude Oil Purchasing Co.	28,850,000
Carter Oil Co.	17,877,416
*Other lines	8,600,000
Total May	110,526,322
Total April	110,013,306
Difference	513,016

*Estimated. †Includes shipments of Texas crude.

Note—Stocks do not include approximately 8,100,000 bbls. of crude oil held in storage on private tank farms and leases.

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, '24	May, '24
Nat. Transit	205,042.09	199,626.14
S. W. Pa. P. L.	88,381.19	85,544.16
Eureka P. L.	380,526.94	372,494.35
Buckeye P. L. (Macksburg)	261,541.19 *	258,024.34
Buckeye P. L. (Cleveland)	16,107.20	15,210.59
Buckeye P. L. (Lima, etc.)	142,396.88	145,504.50
Indiana P. L.	12,436.48	12,812.12
Cumberland P. L.	356,889.53	372,609.80
N. Y. Transit	16,513.19	19,947.74
Tidewater P. L.	141,622.32	152,075.52
Pure Oil P. L.	183,828.77	188,558.69
Emery P. L.	35,132.01	35,511.41
Indian Ref.	231,387.23	66,447.27
Paragon Dev.	48,415.67	41,802.11
Pittsburgh P. L.	8,169.04	8,903.97
Swiss P. L.	.....	.....
Rigs. Ref.	3,346.25	5,124.29
Total	2,131,736.08	1,980,197.00
Daily average	71,057.87	63,941.84

Note—Indian Refining Co. also reported other receipts of 293,234.66 bbls. Paragon Refining Co. had other receipts of 174,682.85 bbls. Paragon Development Co. had other receipts of 5,289.80 bbls. Pittsburgh Pipe Line had other receipts of 4,465.16 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, '24	May, '24
Nat. Transit	543,212.41	373,131.02
S. W. Pa. P. L.	287,478.70	253,585.74
Eureka P. L.	146,075.27	112,059.21
Buckeye P. L. (Macksburg)	89,013.28	100,473.73
Buckeye P. L. (Cleveland)	728.00	1,214.64
Buckeye P. L. (Lima, etc.)	656,008.49	680,684.61
Indiana P. L.	900,901.21	931,269.90
Cumberland P. L.	144,619.49	151,162.89
Southern P. L.	.....	.....
Crescent P. L.	.....	.....
N. Y. Transit	592,141.87	607,491.62
Northern P. L.	120,025.15	80,309.14
Tidewater P. L.	138,842.18	130,310.85
Pure Oil P. L.	200,612.67	204,887.66
Emery P. L.	23,002.49	38,385.97
Paragon Ref.	191,612.24	181,821.26
Indian Ref.	325,499.86	381,740.52
Paragon Dev.	56,687.68	44,760.63
Pittsburgh P. L.	12,861.46	11,634.19
Total	4,428,322.45	4,184,923.59
Daily average	147,610.75	134,997.50

Note—Indian Refining Co. also reported other deliveries of 12,698.94 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of April and May were as follows:

	April, '24	May, '24
Nat. Transit	1,105,932.47	969,320.61
S. W. Pa. P. L.	717,218.99	740,981.21
Eureka P. L.	1,792,565.99	1,910,892.33
Buckeye P. L. (Macksburg)	489,229.60	576,679.85
Buckeye P. L. (Cleveland)	17,746.31	16,959.02
Buckeye P. L. (Lima, etc.)	3,054,622.29	3,184,897.93
Indiana P. L.	618,065.87	628,594.63
Cumberland P. L.	556,556.10	568,123.90
Southern P. L.	436,255.29	512,524.99
Crescent P. L.	50,361.96	80,724.80
N. Y. Transit	771,716.68	704,366.99
Northern P. L.	588,009.15	763,364.39
Tidewater P. L.	.....	.....
Pure Oil P. L.	373,501.89	359,255.82
Emery P. L.	23,364.52	21,790.55
Paragon Ref.	184,092.70	175,717.01
Indian Ref.	127,303.63	101,113.46
Paragon Dev.	9,956.12	11,370.55
Pittsburgh P. L.	5,662.00	7,521.89
Swiss P. L.	.....	.....
Riggs Ref.	580.52	1,299.14
Toal	10,922,742.08	11,335,309.07
Increase	15,989.92	412,566.99

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of April and May, showing the gross stocks of the above fields:

	April, '24	May, '24
Pennsylvania	3,744,977.96	3,923,093.00
Lima	1,043,699.80	1,113,472.67
Kentucky	1,404,197.29	1,441,241.81
Mid-Continent	4,638,570.53	4,779,382.96
Illinois	91,296.59	78,118.63
Total	10,922,742.08	11,335,309.07

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1921	1922	1923	1924
Jan.	64,460	67,702	75,790	62,638
Feb.	70,054	75,096	71,093	68,023
Mar.	68,555	78,531	76,592	68,721
April	65,030	76,462	75,614	71,058
May	65,466	77,592	77,365	66,942
June	63,438	76,193	77,592	.....
July	59,456	76,435	71,879	.....
Aug.	64,888	79,337	76,910	.....
Sept.	60,110	78,512	72,368	.....
Oct.	57,683	77,209	76,256	.....
Nov.	54,479	75,313	70,762	.....
Dec.	61,000	73,351	69,271	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for past four years:

	1921	1922	1923	1924
Jan.	115,550	119,791	171,067	145,518
Feb.	96,736	111,362	164,219	148,732
Mar.	84,168	127,752	185,487	147,098
Apr.	101,015	127,068	170,751	147,611
May	100,253	127,840	177,102	134,997
June	105,037	127,688	173,698	.....
July	97,096	137,872	168,330	.....
Aug.	101,652	153,275	142,766	.....
Sept.	117,440	158,761	137,266	.....
Oct.	105,728	165,345	134,597	.....
Nov.	121,803	165,677	131,426	.....
Dec.	104,023	172,861	139,909	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

Jan.	16,297,858	14,040,567	12,997,393
Feb.	17,009,293	14,028,427	11,844,068
Mar.	16,877,937	13,873,146	10,986,782
Apr.	16,777,842	13,737,575	10,923,576
May	16,948,962	13,815,622	11,335,309
June	16,810,169	14,541,253	.....
July	16,669,286	14,645,584	.....
Aug.	16,235,229	14,770,539	.....
Sept.	16,228,545	14,803,444	.....
Oct.	15,757,746	14,504,111	.....
Nov.	15,171,972	14,157,726	.....
Dec.	14,323,765	13,444,361	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1923—	Receipts	Shipm'ts	Stocks
May	3,538.73	4,856.42	23,796.21
June	2,927.71	4,743.78	21,980.14
July	2,996.64	1,471.67	23,445.11
Aug.	3,199.07	3,769.34	22,874.84
Sept.	2,829.79	5,822.38	19,882.25
Oct.	2,694.23	5,251.81	17,324.67
Nov.	2,980.66	4,150.98	16,154.67
Dec.	3,893.07	3,499.27	16,548.47
1924—			
Jan.	2,942.19	3,641.71	9,948.95
Feb.	2,151.78	1,926.55	10,073.18
March	3,398.78	1,716.28	11,756.68
April	3,311.84	2,066.78	13,001.54
May	3,036.50	5,338.21	10,699.83

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, June 1	2,191,717.13
Runs from wells	721,111.40
Other receipts	192,023.73
Regular deliveries	471,709.21
Other deliveries	396,431.55

The amount of Illinois oil run by the Tidewater Pipe Line Co. in May was 23,063.04 bbls., and deliveries were 38,625.95 bbls. Adding these figures to those of the Illinois Pipe Line Co., makes the runs and deliveries from the Illinois field as follows:

1923—	Runs	Deliveries
May	624,107.98	523,516.09
June	582,511.83	509,187.77
July	594,653.42	459,260.17
August	594,747.94	367,163.31
September	542,561.59	306,925.49
October	576,867.09	347,312.31
November	546,859.43	295,593.09
December	534,185.04	283,543.61
1924—		
January	493,337.25	280,732.09
February	535,490.70	353,613.14
March	611,289.36	369,543.31
April	514,356.43	339,546.18
May	751,080.44	510,414.63

The Tidewater Pipe Co., Ltd., also delivered in May, 220,647.98 bbls. of Oklahoma oil. The total deliveries of all grades by the Tidewater were 359,583.88 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Av. bbls. per wk.—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All-Ports
January	135,800	15,400	665,400	160,400	100,600	1,080,600	.....	172,000	.....	.....	172,000	1,252,600
February	90,250	36,250	832,000	208,250	36,250	1,203,000	.....	195,250	.....	.....	195,250	1,398,250
March	42,455	17,388	623,455	209,321	77,455	970,067	.....	.....	.....	.....	.....	970,067
April	39,669	17,969	614,369	88,200	52,269	812,476	.....	.....	.....	.....	.....	812,476

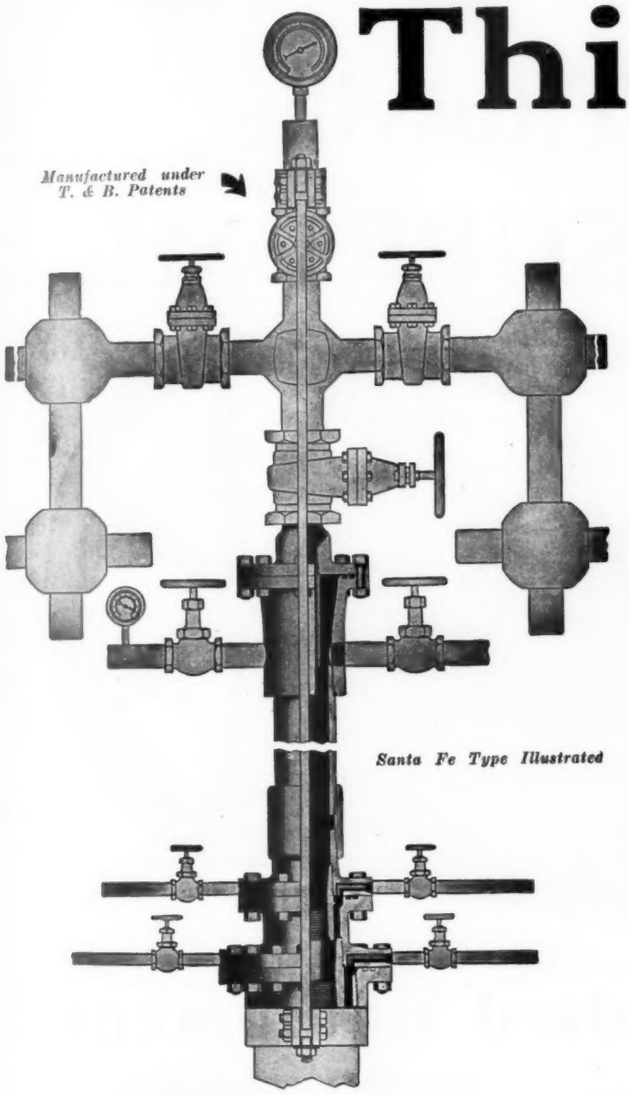
AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Av. bbls. per wk.—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Pt. Arthur Sabine Pass	Tampa	Total	Total All-Ports
November	67,200	108,869	270,669	122,500	195,060	764,200	345,490	359,331	147,469	33,367	885,731	1,644,131
December	106,000	133,679	240,254	144,739	300,545	924,217	420,224	493,700	146,949	61,258	1,161,140	2,076,357
January	112,800	118,200	552,000	97,800	215,800	603,200	358,800	248,000	137,800	20,800	772,200	1,535,000
February	134,750	175,750	195,250	102,750	299,250	907,750	372,500	296,000	190,250	36,500	895,250	1,803,000
March	148,358	141,806	283,458	124,642	292,642	990,906	463,806	365,358	223,552	55,545	1,108,261	2,099,167
April	152,369	154,931	319,900	94,962	248,969	971,131	382,900	348,131	119,000	15,869	866,900	1,837,031

GROSS PRODUCTION BY MONTHS AND DAILY AVERAGE IN THE U. S. FOR 12 MONTHS

1923—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Wyoming-Montana	Other fields	Total
June:	Month	22,667,106	15,572,730	9,129,232	2,797,830	3,401,172	2,086,670	3,470,176	3,413,155	62,538,121
	Daily average	755,570	519,091	304,309	93,261	113,372	69,392	115,672	113,771	2,084,604
July:	Month	25,262,082	15,260,184	11,258,042	2,448,566	3,713,738	1,882,481	4,245,547	3,334,110	65,904,750
	Daily average	814,906	492,264	363,518	78,986	119,798	60,725	136,953	107,552	2,126,702
August:	Month	26,440,005	14,049,076	12,157,429	2,316,320	3,292,580	1,952,349	4,290,406	3,479,077	67,977,242
	Daily average	852,903	453,196	392,173	74,720	106,212	62,979	138,400	115,969	2,192,814
September:	Month	25,762,487	12,812,220	12,879,682	2,234,730	3,164,900	1,787,430	4,561,550	3,269,551	66,472,550
	Daily average	858,750	427,074	429,323	74,491	105,497	59,581	152,052	105,468	2,215,752
October:	Month	24,576,400	12,961,782	15,933,383	2,336,346	3,120,274	1,837,990	3,540,880	3,475,913	67,783,068
	Daily average	792,787	418,122	513,980	75,366	100,654	59,290	114,223	112,126	2,186,551
November:	Month	22,397,848	12,324,620	15,556,507	2,268,840	2,973,000	1,816,860	4,792,466	3,138,464	65,378,605
	Daily average	746,595	411,154	518,550	75,628	99,100	60,562	159,782	104,615	2,176,351
December:	Month	21,899,247	12,232,259	10,065,856	2,345,150	4,017,850	1,919,574	3,304,326	3,147,812	58,932,074
	Daily average	706,427	394,589	324,705	75,650	129,608	61,922	106,591	101,542	1,901,034
1924—										
January:	Month	20,912,500	12,115,353	10,089,291	2,254,878	3,686,680	1,827,053	4,631,395	2,956,500	58,473,650
	Daily average	674,597	397,263	325,461	72,738	118,925	58,937	149,409	95,339	1,886,649
February:	Month	19,341,226	12,236,637	10,372,024	3,112,853	3,302,750	1,697,892	4,275,706	2,997,701	56,336,791
	Daily average	666,939	421,953	357,656	72,857	113,888	58,548	147,438	103,369	1,942,965
March:	Month	19,913,262	13,367,851	11,501,440	2,206,425	3,882,695	1,791,049	3,992,215	3,267,759	59,912,796
	Daily average	642,363	431,221	372,450	71,175	125,248	57,775	128,784	105,089	1,933,077
April:	Month	19,299,849	13,482,240	11,755,890	2,268,540	4,068,225	1,644,840	3,880,410	3,231,000	59,630,994
	Daily average	643,328	449,408	391,863	75,618	135,608	54,828	129,347	107,700	1,987,698
May:	Month	19,833,576	14,232,193	11,847,456	2,480,310	4,659,117	1,863,441	4,033,564	3,355,316	62,304,973
	Daily average	639,793	459,103	382,176	80,010	150,291	60,111	130,115	108,236	2,009,934
Total 12 months		268,305,588	160,657,145	143,146,282	28,070,788	43,282,981	22,107,629	49,018,741	39,055,358	753,644,512
Daily average		733,075	438,954	390,563	76,696	118,260	60,400	133,930	106,709	2,058,778

Look Out For This!



Manufactured under T. & B. Patents

Santa Fe Type Illustrated

The reckless auto driver isn't much worse than the hard-shelled individual who throws experience to the four winds and takes chances with **wild** wells! Thousands of dollars can go up in smoke **in a few moments.** Almost irreparable damage can be done. The lost **time** can NEVER be computed.

The Regan Casing Control Head **keeps** your well **safely** under control. It is a positive preventive against blowouts, gas leaks—and DANGER! It is the best single investment you can make! . . . . Get complete descriptive catalog today.

Represented by: Hillman-Cooney, Inc.
Wright-Callender Bldg., Los Angeles, Cal.

Regan

Forge & Engineering Co.

Manufacturers of Oil Well Equipment

Quality — Wrought on the Forge of Experience

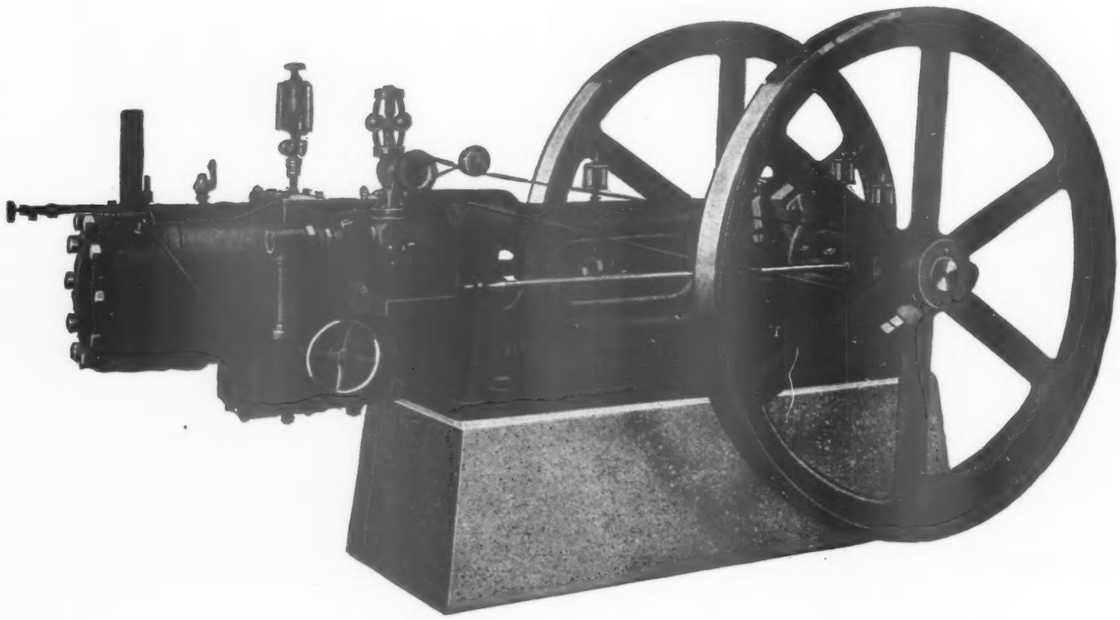
San Pedro, *California* U·S·A.

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the postoffice at Tulsa, Okla., under the Act of March 3, 1879.

WICO

and the Titusville

POWER SUPREME



WICO MAGNETOS
Are Standard Equipment on these Engines

Araco	Marion
Bessemer	Spence
Foos	Butler
Boos	Combination
Hagan	Economy
Myrick	Reliable
Hercules	Perfection
Spang	Pumping Power
McEwen	J-C
Jones	Stover
Reid	McJunkin
Bovaird	Evans
Bovaird and Seyfang	Clark
Black Bear	Franklin
Bali	Valveless
Koots & Stroehman	Grettenberger
Pattin	McDonell & Brannen
Novo	Superior
Tico	Lucy
Olin	Weber
	Otto

Standard Equipment
on all
Titusville Engines Since 1911

Since 1911 every Titusville Engine has been WICO equipped and because of continuous, dependable service WICO was chosen as the most reliable ignition system and adopted by Titusville Engineers as standard Magneto equipment on their latest achievement, the "Tico" engine.

WICO ELECTRIC CO.

Branch at Tulsa, Okla. **Springfield, Mass.**

Entered as second-class mail matter December 15, 1911, at the postoffice at Tulsa, Okla., under the Act of March 3, 1879.

Short Story of a Big Achievement—

THE story of a machine which saves money. For all plants—small, medium, and large. A simple machine. A reliable machine. An efficient machine. One which reduces operating and production worries.

SIMPLICITY—the true test of a designer's ability. A machine that is simple is also easy to operate. Experienced labor is not required. There are no complicated mechanisms. Interruptions in production schedules are avoided.

RUGGEDNESS—next of kin to Simplicity and equally important. It guarantees long life. It keeps repair costs low. It is proof that the parts are properly proportioned—every pound of metal is worth the money spent for it.

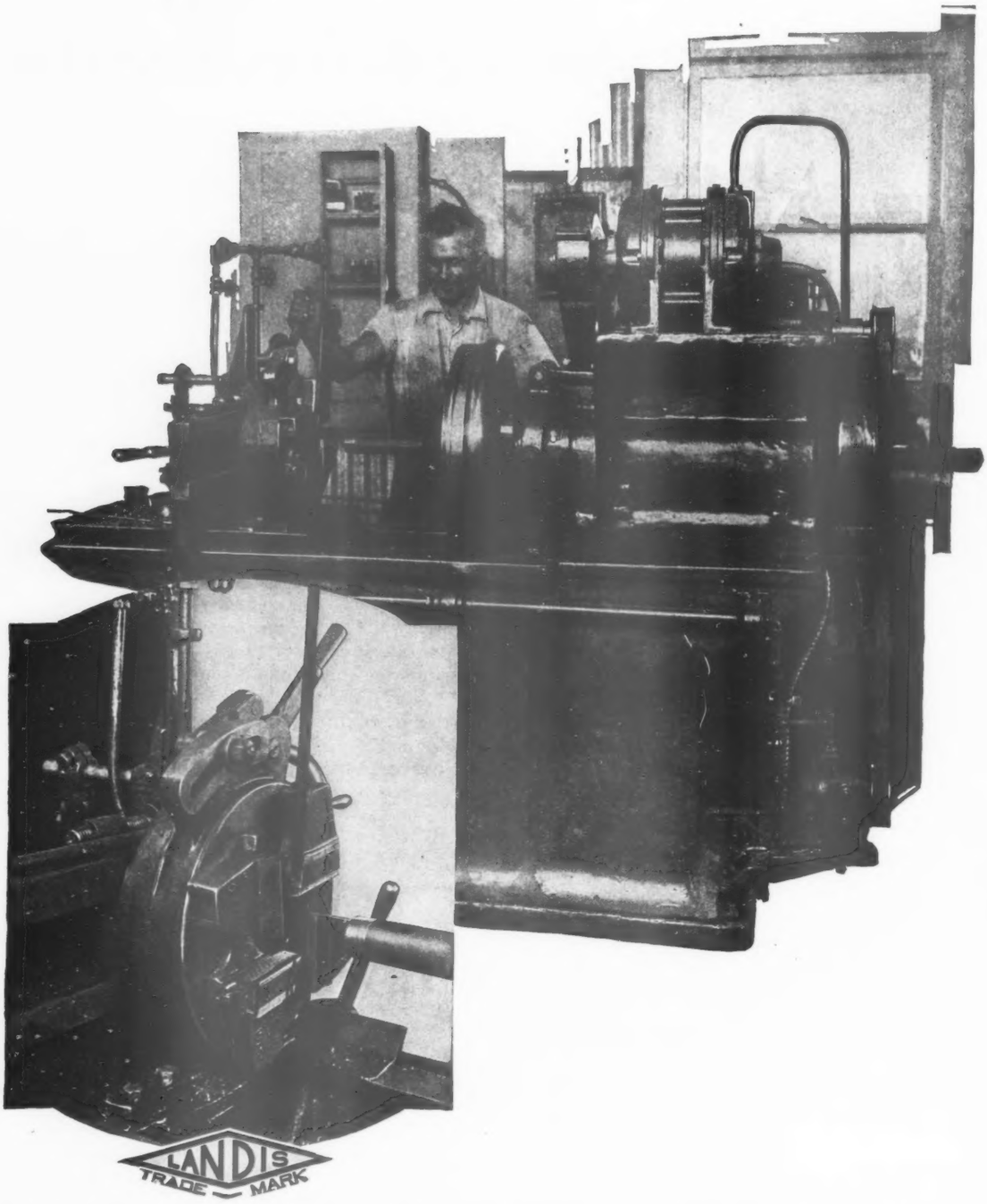
EFFICIENCY—the measuring stick of engineering. The standard of exact comparison. Not mechanical efficiency—not electrical efficiency, but high over-all efficiency. Sustained Efficiency.

(*Continued in the next issue.*)

INGERSOLL-RAND COMPANY-11 BROADWAY, NEW YORK CITY
Offices in all principal domestic and foreign cities

Ingersoll-Rand

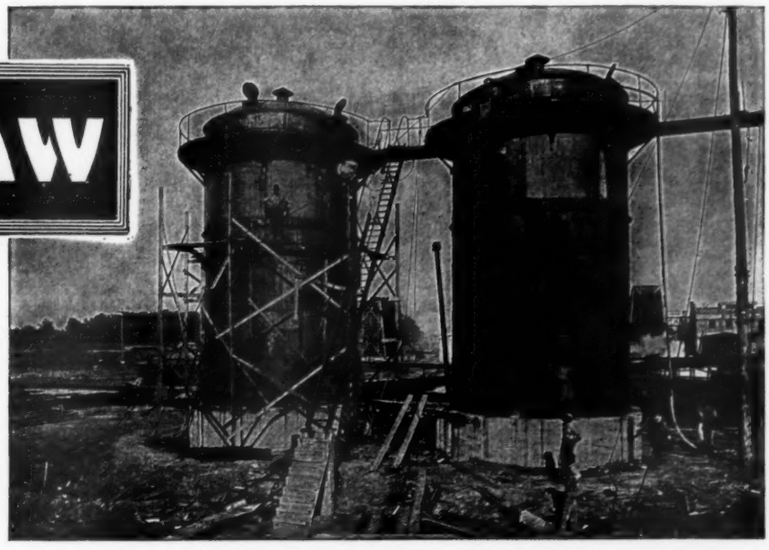
IT MIGHT HAVE BEEN SCRAP



• The Union Oil Company of California, "Stearns Lease," Brea, California, chose Landis Pipe Threading Machines because of their proven ability to do the most and waste the least. This company actually converts the waste pipe into usable fittings. In conjunction with a pipe straightener a 2″ Landis Machine is used in the Union Company's Salvage Department to convert twisted pipe and short ends into nipples. Pipe which would otherwise be sold for scrap is made into nipples and placed in the company's supply station.

This company uses five other Landis Machines—and specifies "Landis" for their additions and replacements. Their profitable Landis experience can as well be yours—details?

LANDIS MACHINE COMPANY, Inc.
Waynesboro, Pa., U. S. A.



Specialized Building!

Years of concentration and specialization in building better products has given KAW refinery equipment the superiority it holds today.

KAW products are built by men who for years have built nothing but super refinery equipment and who have attained leadership in their line.

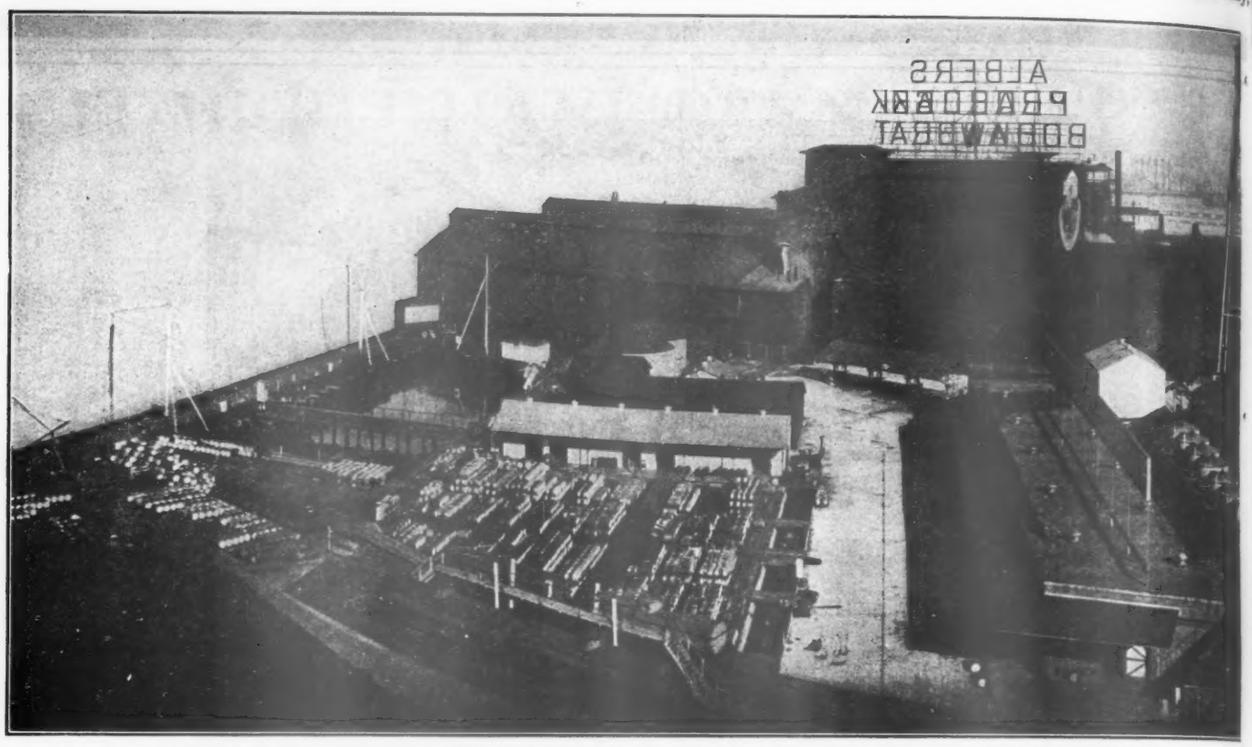
High pressure stills, storage tanks, all the steel products manufactured in our plant, are equally well made. They may be analyzed part for part and unit for unit and in every instance will be found to display those qualities which assure longer, more economical service. Each represents a standard, each is the result of specialized knowledge.

You save money by getting KAW prices and specifications first. Write or wire for them.

KAW BOILER WORKS COMPANY

General Office and Plant: 1st and Walker Ave., Kansas City, Kansas

8672



Here again—only the *Foamite* System

This big plant of the Associated completely safeguarded by a

A GREAT central oil station, distributing its product through a whole state. . . Three hundred thousand barrels storage capacity. Deep-water tankers unloading at the docks. Trains of tank cars constantly passing in and out.

Here was a fire risk that demanded *sure, unfailing protection*—not only for the property itself but for the surrounding city and its thousands of workers.

A study of fire records showed that only one method of protection would answer. A standard, complete *Foamite* System was furnished by and installed under the supervision of Foamite-Childs fire protection engineers.

Every part of this great plant is now ready to repel fire—to check and kill fire before it can gain serious headway. Tanks, docks, train-loading racks, buildings—the *Foamite* System extends to all of these points, ready to throw a fire-smothering blanket of Firefoam over any blaze that breaks out.

Piping carries the two Firefoam solutions from the special pumping house to *Foamite* mixing chambers on the storage tanks and to special hydrants distributed at other major danger points. Portable *Foamite* apparatus is located at various points to catch and smother the small incipient fires.

FOAMITE-CHILDS

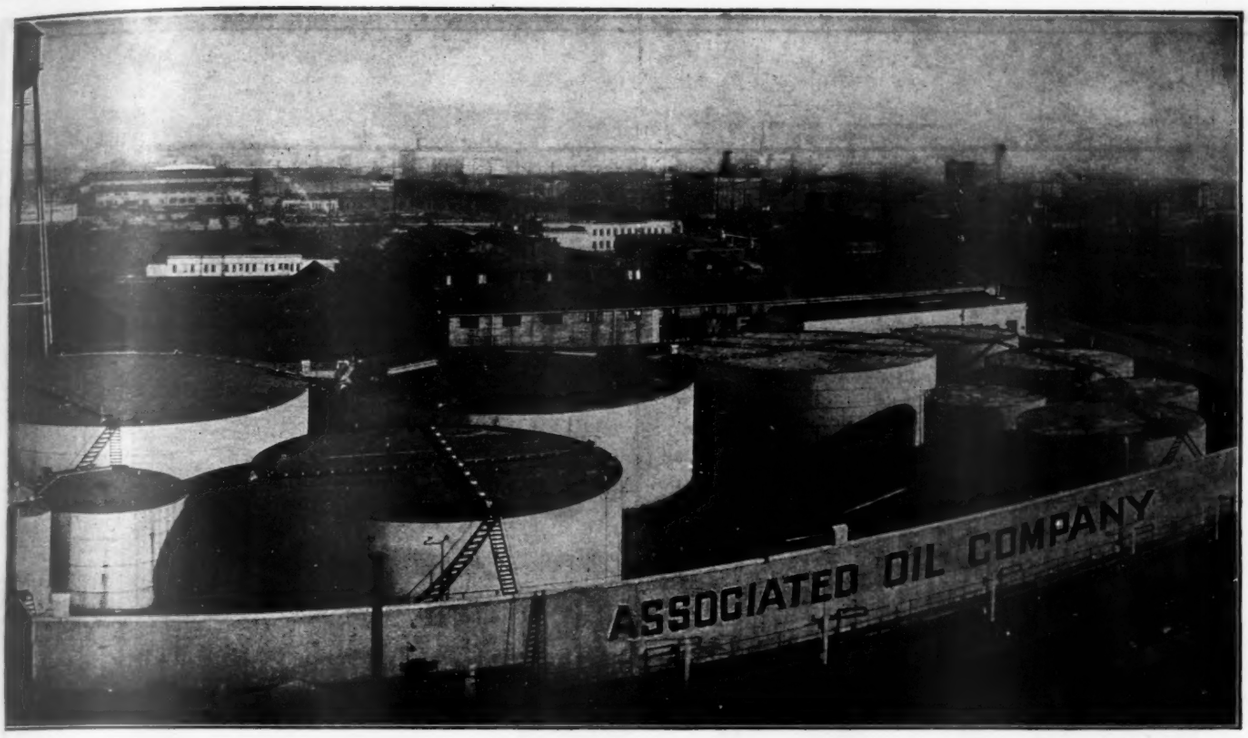


Photo courtesy Seattle Post-Intelligencer

could give adequate fire protection

Oil Company, at Seattle, is standard Foamite *System*

This complete ***Foamite*** installation is one of several hundred now protecting over 52,000,000 barrels of oil and oil products in tanks and refineries throughout the country. ***Not a single one of these Foamite Systems has ever failed when designed, installed, and maintained under the supervision of Foamite-Childs engineers.***

Foamite-Childs engineers are ready to consult with you on any question of fire protection, for any type or size of fire risk. This service includes furnishing complete ***Foamite*** Systems, correct detail designs for Systems, or ***Foamite*** materials for the System—in short, whatever you need for adequate fire protection. Our engineers have made a profession of protecting oil property from fire. Their record is unapproached in this highly specialized field.

Representatives at 300 convenient centers enable you to get in personal touch with us promptly. Write for free illustrated literature giving full particulars of ***Foamite*** Protection for the oil industry.

FOAMITE-CHILDS CORPORATION
Fire Protection Engineers and Manufacturers
732 Turner Street, Utica, N. Y.

Canadian Address: Foamite-Childs of Canada, Ltd. Toronto, Ont.

Sales and Engineering Representatives in the leading cities of all countries

PROTECTION

KELLY & JONES
CAST STEEL HYDRAULIC VALVES

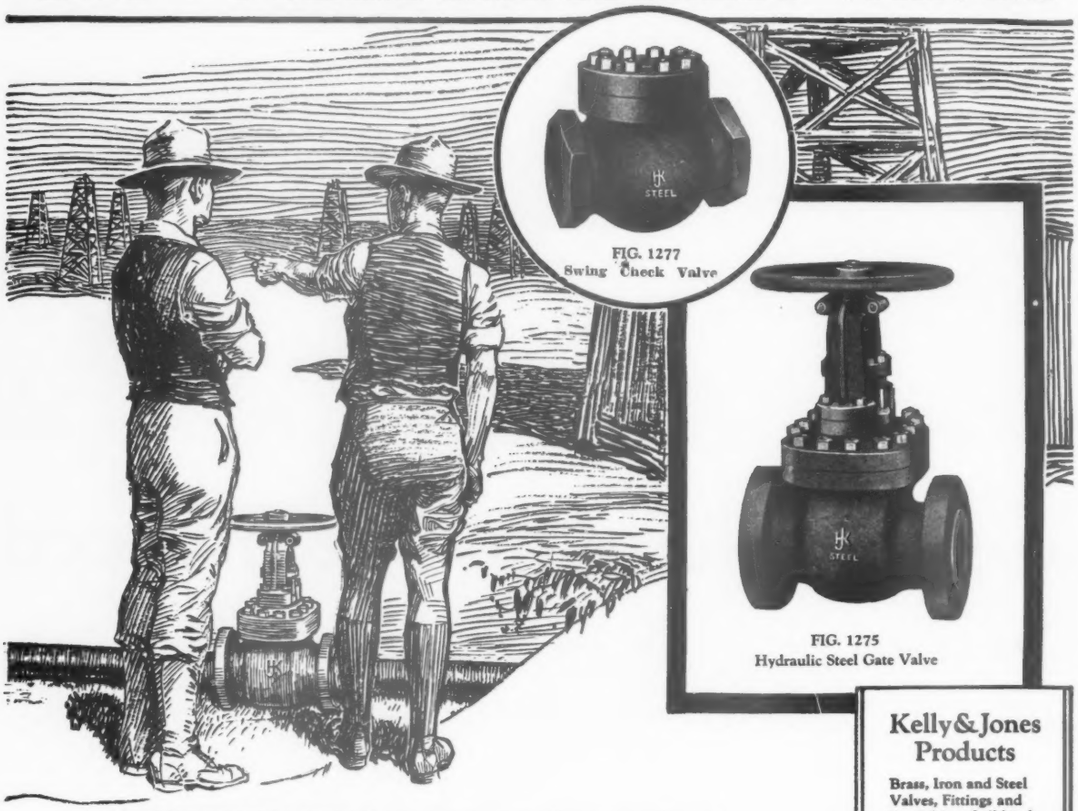


FIG. 1277
Swing Check Valve

FIG. 1275
Hydraulic Steel Gate Valve

Kelly & Jones Products

Brass, Iron and Steel Valves, Fittings and Specialties of all kinds

Power Plant Piping

Pipe Bends, Coils and Welded Headers

Screwed, Shrunk, Welded and Van Stone Flanges

ILLUSTRATED here are two well proportioned, durable and dependable valves that are recommended without reservation for extreme high pressures and severe service.

They are made of Electric Steel in our own steel foundry—are carefully inspected and tested to 3000 pounds hydraulic pressure before shipment. They are furnished with durable hard metal seats, in screwed or flanged styles, sizes 2" to 6".

Kelly & Jones Hydraulic Cast Steel Valves have been giving dependable service in all the oil fields—why not specify them on your next order?

WRITE FOR OUR CATALOG "S"

THE KELLY & JONES CO.

Manufacturers of

Dependable Valves & Fittings for all Pressures and Purposes

WORKS - GREENSBURG, PENNA.

BRANCH STORES AND OFFICES { NEW YORK - PITTSBURGH - CHICAGO - CINCINNATI
BUFFALO - ST. LOUIS - SAN FRANCISCO.

"Day and Night Service"

Republic Supply Stores are located at convenient points throughout the Mid-Continent and Coast fields, ready to fill your needs AT ANY HOUR OF THE DAY OR NIGHT, with oil field equipment of the kind that has built a reputation for efficiency; such as:

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

American Steel & Wire Co.'s and Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes Special Milling Cutters.

Bovaird & Seyfang, and McNamar Oil Field Boilers.

Jones' Acme Sucker Rods. **Jones' Acme Gas Engines.**

District Headquarters and Stores Located at

HOUSTON, TEXAS
Corsicana, Texas (Mildred)

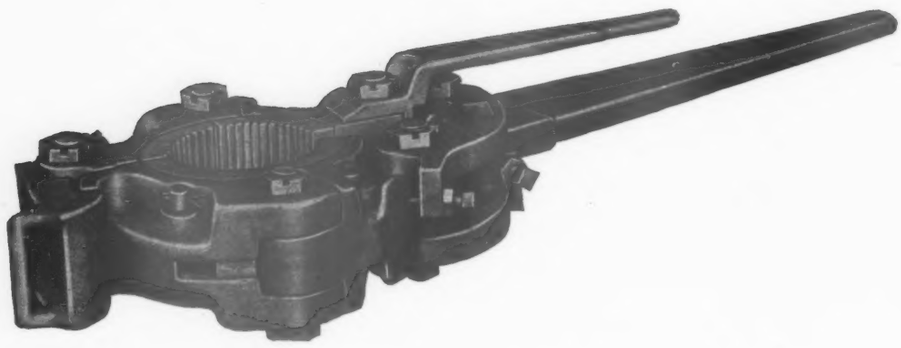
SHREVEPORT, LA.
El Dorado, Ark.
Smackover, Ark.

WICHITA FALLS, TEXAS
Graham, Texas
Breckenridge, Texas
Electra, Texas
Burkburnett, Texas
Wilson, Okla.
Duncan, Okla.

TULSA, OKLAHOMA
Tonkawa, Okla.
Henryetta, Okla.
Yale, Okla.
Shidler, Okla.
Haskell, Okla.
Beggs, Okla.
Slick, Okla.
Bristow, Okla.
Wewoka, Okla.
Hominy, Okla.
Okemah, Okla.

Republic Supply Co.

The Verdict



"The Best Tong I Ever Used"

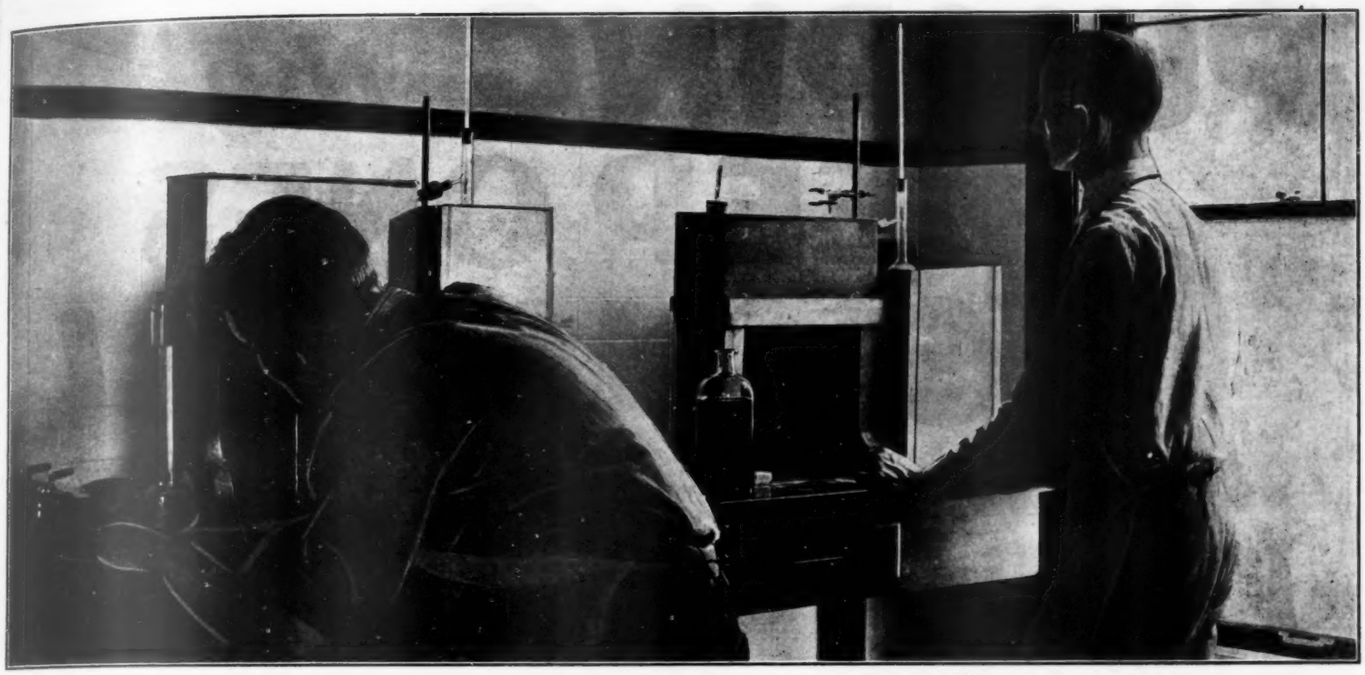
This is the Verdict of the Roughnecks, Drillers and Contractors on every job where the New Eureka is doing all the Tonging

Get Prices and Literature on the

NEW EUREKA TONGS

Manufactured by

LeBUS ROTARY TOOL WORKS
Electra, Texas U. S. A.



Guaranteed Grades of Natural Gasoline

Every car of natural gasoline from our plants is guaranteed to meet exactly the specifications ordered.

Before shipping, thorough tests are made in our complete laboratory and the most careful inspection given the contents of each car.

So exhaustive are our tests that complaints from our customers (many of whom make equally thorough tests) are practically unknown.

NATURAL GASOLINE GRADES MANUFACTURED BY CHESTNUT & SMITH CORPORATION

Natural Gasoline

GRADE "A"
Gravity.....Not below 72° Be.
Not above 78° Be.
E. P.....Not over 375° F.
Recovery....Not less than 90%

GRADE "B"
Gravity.....Not below 76° Be.
Not above 82° Be.
E. P.....Not over 375° F.
Recovery....Not less than 85%

GRADE "C"
Gravity.....Not below 80° Be.
Not above 88° Be.
E. P.....Not over 350° F.
Recovery....Not less than 78%

GRADE "D"
Gravity.....Not below 88° Be.
Not above 92° Be.
E. P.....Not over 350° F.

Motor Natural Gasoline

GRADE "1"
Gravity.....Not below 58° Be.
Not above 62° Be.
E. P.....Not over 437° F.
Recovery....Not less than 91%

GRADE "2"
Gravity.....Not below 58° Be.
Not above 62° Be.
E. P.....Not over 450° F.
Recovery....Not less than 90%

GRADE "3"
Gravity.....Not below 64° Be.
Not above 66° Be.
E. P.....Not over 440° F.
Recovery....Not less than 88%

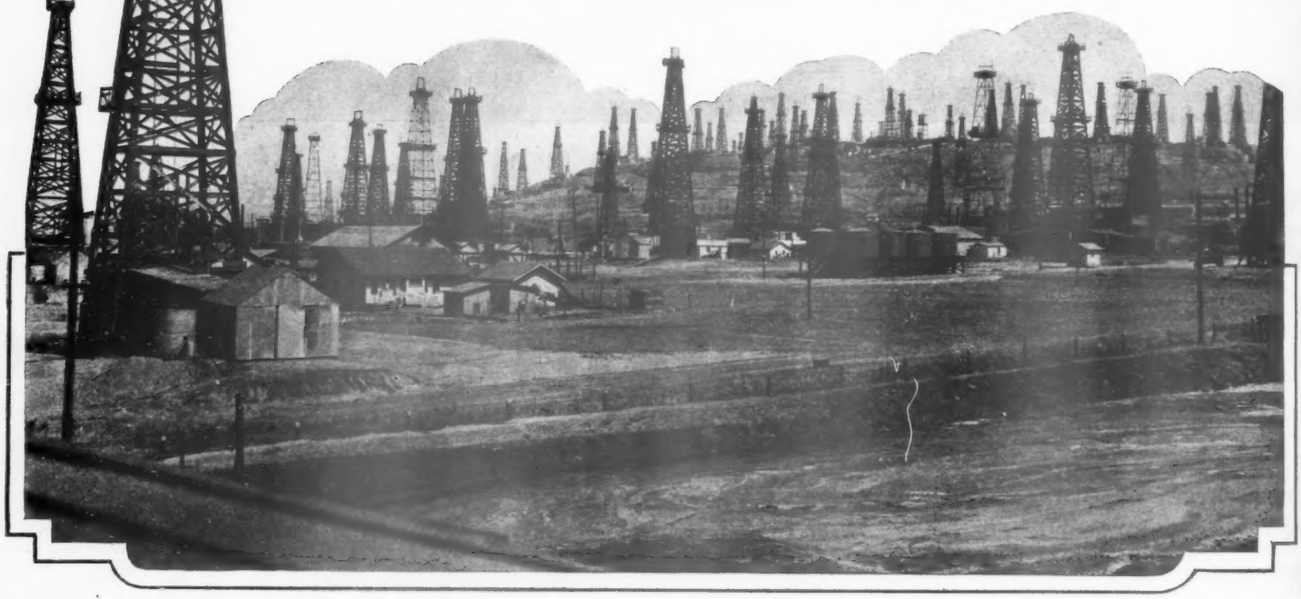
GRADE "4"
Gravity.....Not under 66° Be.
Not over 70° Be.
E. P.....Not over 435° F.
Recovery....Not less than 85%

CHESTNUT & SMITH CORPORATION

GENERAL OFFICES ~ CHESTNUT & SMITH BLDG. ~ TULSA OKLA.

PUMPING *the* DEEP ONES *at* SIGNAL HILL

where "Western" Type G-22 Oil Field Pumping engines with Type "C R" Reverse Gears are successfully meeting the supreme test.



Ten Wells in Foreground "Western" Equipped.

There were many who said that such deep holes never could be pumped with gas engines, but we are doing it, providing all the flexibility and speed for cleaning that the steam units offered, and at a greatly reduced expense.

"Western" Oil Field Pumping Engines and Reverse Gears are built for economy and speed, and for operating conditions not met by others. Sizes 25, 30 and 40 H. P.

"ASK US WHY AND HOW"

WESTERN MACHINERY COMPANY

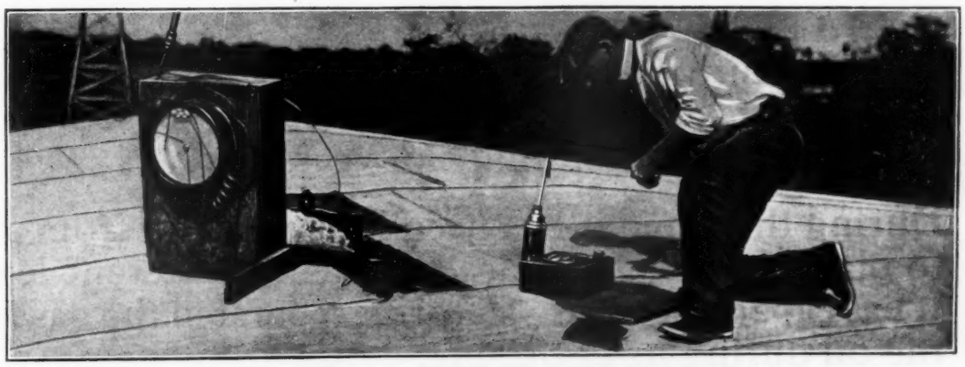
General Offices & Factory—900 N. Main Street,
Los Angeles, California

Branches:

Tulsa, Oklahoma | **Okmulgee, Oklahoma** | **San Francisco, California** | **Bakersfield, California**

Insulate your tank tops

200 to 300 barrels of gasoline evaporate monthly from a "55" containing light crude covered with a roof of this type.



Repeated tests show that a Johns-Manville Vapor Tight Insulated Tank Top will cut the above loss to about 25 barrels per month.

Note: The Johns-Manville Vapor Tight Insulated Tank Top provides for thorough insulation of the vapor space above the oil, cutting down breathing losses, and includes an effective eave and roof seal that makes tanks vapor tight. Applied by manufacturer under careful supervision.

Over ten million barrels storage capacity is equipped with Johns-Manville Vapor Tight Insulated Tank Tops. Write any Johns-Manville office for full particulars.

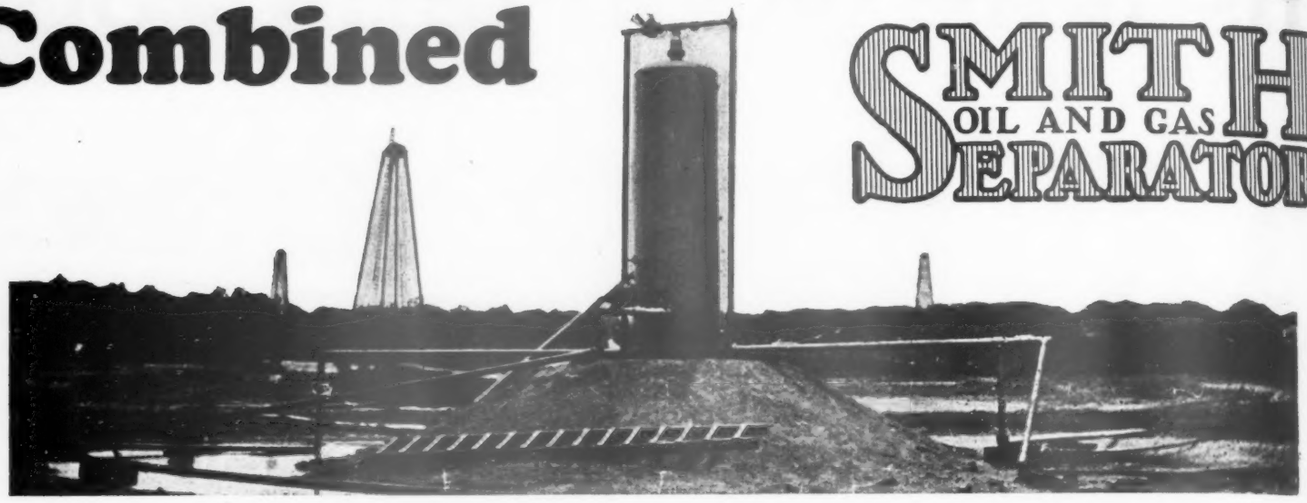
JOHNS-MANVILLE, Inc.
292 Madison Ave. at 41st St., New York City
Branches in 62 Large Cities
For Canada:
Canadian Johns-Manville Co., Ltd., Toronto

COVERS THE CONTINENT
Through
Asbestos
and its allied products
INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE
Oil Industry Department

Economy and Efficiency Combined

SMITH OIL AND GAS SEPARATOR



THE Smith Oil and Gas Separator shown above is one of the first made and was purchased by the Shaffer Oil and Refining Co. years ago.

During that time it has been moved about from place to place, having been used on many different leases. It has capably and satisfactorily separated the gas from the oil during its entire life.

Today, it is installed on the Yahola Lease, Sec. 22, Twp. 18, R. 8, Cromwell Field. It is handling the production of the No. 1 well. It is separating out the gas which is sold for use at 18 drilling boilers returning a revenue of $450 per day. One hundred barrels of pipe line oil are also returned each day.

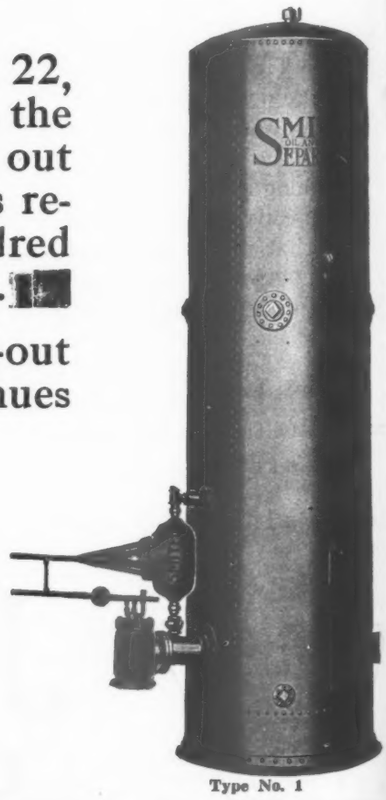
There is no record of repairs needed or of time-out for breakages. This is a case of increased revenues due to efficient separation.

The Smith Separator is made in the following sizes:

Type 1—Capacity 5000 bbls. oil, 10 million cu. ft. gas.

Type 2—Capacity 2000 bbls. oil, 5 million cu. ft. gas.

Type 3—Capacity 500 bbls. oil, 1 million cu. ft. gas.



Type No. 1

SMITH SEPARATOR COMPANY

Chestnut & Smith Corp. Bldg. TULSA, OKLA. Phone Osage 6220

California Office: 821 Haas Bldg., Los Angeles, Calif.
Texas Office: 611 South Beacon St., Dallas, Texas

Export Representative, Oil Field Equipment Co., 30 Church St., N. Y.
Cable Address, "Oilfield," New York

Dayton

Dayton Couplings provide a tight jointed line with flexibility.

THE DAYTON PIPE COUPLING CO.
DAYTON, OHIO

DURNELL ABLE SPECIALTIES

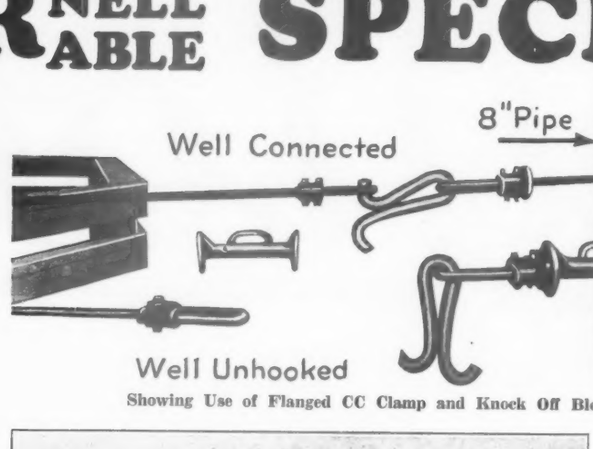
Trade Mark

Showing Use of Flanged CC Clamp and Knock Off Block

Iron Knock Off Block

Flanged CC Clamp

4 Bolt Polish Rod Clamp

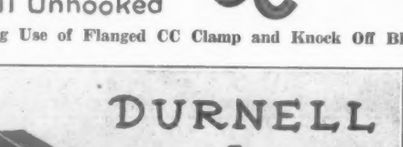


Showing 6" CC Clamp—6 Bolt Clamp and Knock Off Block

2 Bolt Eccen. Fric. Clevis

6 Bolt Flanged Friction Clamp

Used as a Hold Down at Knock Off Post



Used as a Hold Up at Knock Off Post

Used as a Slight Hold Up Over a Hill

UNION MACHINE COMPANY
Bartlesville, Okla.

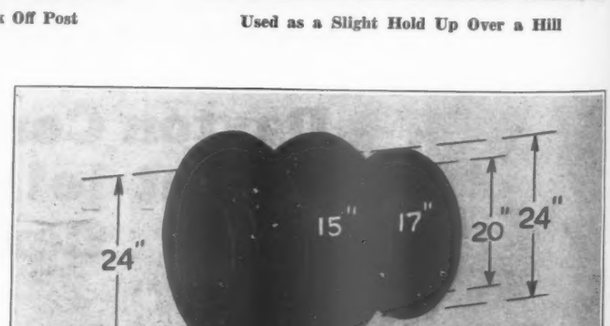
Manufacturers of

DURNELL UNDERPULL

Bandwheel and Geared Powers

Wood Lagged or Flanged Steel Rims

INTERNATIONAL SUPPLY CO., Agents



To Fit Bull Wheel Shafts—Steel Drums—Two Extra Speeds

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co. 141
Acme Petroleum Co. 108
Ajax Iron Works 56-57
Aldrich Pump Co. .....
American Appraisal Co. .....
American Cable Co. .....
American Rolling Mill Co. .....
American Schaeffer-Budenberg Corp. 145
American Sheet & Tin Plate Co.....
American Tank Co. .....
American Well & Prospecting Co....
American Zinc, Lead & Smelting Co.
Anderson, Carl B. 145
Anderson & Anderson 146
Andrews Steel Co. 117
Armstrong Bros. Tool Co. 140
Armstrong Mfg. Co. .....
Athey Truss Wheel Co. 69
Atlas Ball Co. .....
Austin Co. 101
Axelson Machine Co. .....

B

Baker Casing Shoe Co. 140
Baldwin Chain & Mfg. Co. 117
Barber-Greene Co. .....
Barnes Mfg. Co. 82
Barnickel, Wm. S., & Co. 142
Barnsdall Refining Co. 137
Bartlesville Supply Co. .....
Bay City Foundry & Machine Co....
Bell Pump Co. 133
Bessemer Gas Engine Co. 59
Bethlehem Shipbuilding Corp. .....
Bethlehem Steel Co. .....
Bignall & Keeler Machine Works...113
Biggs Boiler Works Co. .....
Black, Sivalls & Bryson, Inc..... 43
Blaisdell Machinery Co. .....
Borden Co. .....
Boss Mfg. Co. .....
Bovaird & Seyfang Mfg. Co. .....
Braden Co., The 73
Bradford Motor Works 72
Brennan & Rooney .....
Bridgeport Machine Co. 70-71
Bristol Co. .....
Broderick & Bascom Rope Co. .....
Brokaw, Dixon, Garner & McKee....146
Brown & Thomsen 145
Brown Welding & Machine Co..... 86
Buckeye Traction Ditcher Co. .....
Buffalo Steam Pump Co. .....
Burns Tool Co. 132
Burt Mfg. Co. .....
Butler Mfg. Co. .....

C

California Pipe Line Machine Co....
Calorizing Co. .....
Capital Abstract & Realty Co. 141
Carnegie Steel Co. 129
Caudill, Samuel J. 145
Celite Products Co. 112
Central Forging Co. 146
Central Steel Co. 55
Chain Belt Co. .....
Champion Machine & Forging Co....
Chaplin-Fulton Mfg. Co. 139
Chapman Valve Mfg. Co. 89
Chestnut & Smith Corp. 11
Chicago Bridge & Iron Works.....
Chicago Pneumatic Tool Co..... 37
Clapp, Frederick G. 145
Clark Bros. Co. .....
Clark, Robert W. 144
Classified Wants 114-115
Climax Engineering Co. 146
Colonial Steel Co. 139
Columbian Rope Co. 97
Columbian Steel Tank Co. .....
Connolly, D. F., Agency, Inc. .....
Continental Supply Co. 83
Cook Paint & Varnish Co. 118
Cooper, C. & G. Co. 51
Cosden & Co. 123
Cox & Sons Co., The. .....
Crandall & Murta 146
Crane Co. .....
Cyclone Fence Co. .....

D

Darling Valve Mfg. Co. 99
Dart, E. M., Mfg. Co. .....
Davis, G. M., Regulator Co. 138
Dawson Towel Supply Co. 141
Dayton Pipe Coupling Co. 15
De Laval Separator Co. .....
De La Vergne Machine Co. .....
Delta Electric Co. 79
Deming Co. 138
Dempster Mill Mfg. Co. .....

D

Detroit Graphite Co. .....
Daimond Drilling & Exploration Co. 142
Dickey-Ashby-Fountain Co. 141
Dixon, Joseph, Crucible Co. .....
Dresser, S. R., Mfg. Co. 35
Dunn Mfg. Co. .....

E

Eagle Picher Lead Co. 49
Eastern Torpedo Co. .....
Eaton, Clayton H. 146
Empire Refineries, Inc. 111
Equitable Meter Co. 146
Essex Brass Corp. 146
Exchange National Bank .....

F

Fairbanks-Morse Co. .....
Federal Engineering & Supply Co...145
Fenwick-Reddaway Mfg. Co. 137
Fisher Governor Co. 88
Foamite Childs Corp. 6-7
Fohs, F. Julius 144
Foos Gas Engine Co. .....
Fort Worth Laboratories 143
Foster, Dean E., Corp. .....
Foster-Hoefer Mfg. Co. .....
Foster & Reiter 144
Foxboro Co., Inc., The. 116
Francis, Bro. & Co. 138
Franklin Valveless Engine Co. 121
Freeborn Engineering Co. 142
Frick-Reid Supply Co. 65

G

Gantz Tank Co. .....
Gaso Pump & Burner Mfg. Co. .....
.....Inside Back Cover
General American Tank Car Corp...
General Electric Co. .....
General Gear & Machine Works....136
General Motors Truck Co. 109
General Petroleum Engineers, Inc...145
Gilbert & Barker Mfg. Co. 139
Gomory, W. L. 143
Goodrich, B. F., Rubber Co., Inc. .....
Goodyear Tire & Rubber Co. 90
Goulds Mfg. Co. 143
Graver Corp. .....
Great Western Portland Cement Co..
Greenhalgh, J. H. & Co. .....
Greene, Frank C. 144
Greene-Tweed & Co. .....
Greenspons Sons' Iron & Steel Co...144
Griscom-Russell Co. .....
Guiberson Corp. .....Inside Front Cover
Gurley, W. & L. E. .....

H

Halliburton, Erle P. .....
Harris Bros. Co. .....
Harris, Frank, Sons & Co., Inc. .....
Harrisburg Pipe & Pipe Bending Co.
Hazard Mfg. Co. 137
Henry, George W. 141
Herald Bros. 146
Hercules Corp. .....
Hercules Motors Corp. .....
Heydrick Mapping Co. 142
Hill-Hubbell & Co. .....
Hinderliter Tool Co. .....
Homestead Valve Mfg. Co. .....
Hood, H. H. 143
Hoover Steel Ball Co. .....
Hope Engineering & Supply Co...66-129
Hopkins, Edwin B. 144
Hough, Chas. N. Mfg. Co. 140
Hughes Tool Co. .....Back Cover
Hunt, Robert W., Co. 146
Huntley & Huntley 143

I

Illinois Glass Co. 110
Imperial Belting Co. 146
Imperial Brass Mfg. Co. 136
Imperial Oil Marketing Co. 106
Industrial Construction Co. .....
Ingersoll-Rand Co. 3
International Derrick & Equipment Co. 41
International Harvester Co. of America 95
International Supply Co. 53
Iron King Mfg. Co. .....

J

Jackson, Isaac, Belt Fastener Co. 143
Jarecki Mfg. Co. .....
Johns-Manville, Inc. 13
Johnson, Roswell H. 145
Jones, S. M., Co. .....

K

Kansas City Bolt & Nut Co. .....
Kansas City Hay Press Co. 136
Kansas City Structural Steel Co....
Kaw Boiler Works Co. 5
Kellogg, M. W., Co. 119
Kelly & Jones Co. 8
Kelly-Springfield Tire Co. .....
Kerr, John B. 143
Kesselman & Co. 142
Keuffel & Esser Co. .....
Kewanee Boiler Co. .....
Kinney Mfg. Co. .....
Kirk, Charles T. 145

L

Lafe Speer Abstract Co. 141
Landis Machine Co. 4
Larkin & Co. 128
Larkin Packer Co. .....
Lasky, Bernard H. 145
Leavitt Machine Co. .....
Lebus Rotary Tool Works..... 10
Leidecker Tool Co. 92
Lewis, James O. 146
Link-Belt Co. .....
Longyear, E. J., Co. 131-144
Ludlow Valve Mfg. Co. 131
Lufkin Rule Co. 144
Lunkenheimer Co. .....

M

Magnolia Petroleum Co. .....
Maloney Tank Mfg. Co. .....Front Cover
Marsh Gauge Pole Co. 144
Matson, George C. 146
Matteson, W. G. 144
Meriam Co. 146
Messimer, H. H. 145
Metric Metal Works 113
Miller, Max B., & Co., Inc. .....
Moon Mfg. So. 133
Moore, Lee C. & Co., Inc. 47
Morrison Bros. 107
Munn & Co. 143

Mc

McCord Radiator Mfg. Co. .....
McDonald, A. Y., Mfg. Co. 75
McIntosh & Seymour Corp. .....
McGregor Working Barrel Co. .....
McNutt, V. H. 144

N

National Airoil Burner Co. .....
National Lead Co. .....
National Meter Co. 133
National Supply Co. 76-77
National Transit Pump & Machine Co. 80
National Turnbuckle Derrick Co. 132
National Tube Co. 87
New Bedford Cordage Co. 93
Norris Brothers 134
North American Car Co. .....
Northern Oil Information Bureau...142
Novo Engine Co. 94
Nye Tool & Machine Works.....

O

O'Brien Steel Construction Co. 125
Ohio Steel Foundry Co. 91
Oil Conservation Engineering Co.... 67
Oil Well Improvements Co. .....
Oil Well Supply Co. 61-143
Oklahoma Steel Castings Co. .....

P

Page Fence & Wire Products Assn...
Parker Cup & Specialty Co. 139
Parkersburg Machine Co. .....
Parkersburg Rig & Reel Co. 63
Pattin Brothers Co. .....
Penn American Refining Co. .....
Pennsylvania Petroleum Co. 142
Petroleum Iron Works..... 29
Pforzheimer, Carl H. & Co. 123
Pioneer Tank & Boiler Co. 140
Pittsburgh-Des Moines Steel Co. .....
Pittsburgh Meter Co. 132
Pittsburgh Pipe Coil & Bending Co...
Pittsburgh Reinforced Brazing & Machine Co. .....
Powell, Wm., Co. 143
Power Piping Co. .....
Producers & Refiners Corp. 140
Pure Oil Co. 105
Pyle National Co. .....

Q

Quesada, Irving G. 143

R

Reading Iron Co. .....
Reading Steel Casting Co. 144
Reed Roller Bit Co. 45
Regan Forge & Engineering Co. 1
Reid, Joseph, Gas Engine Co. 84
Republic Iron & Steel Co. .....
Republic Rubber Co. .....
Republic Supply Co. 9
Rhode Island Fittings Co. 138
Rich, John L. 145
Ring, Dewitt T. 142
Robinson, Heath M. 142
Robinson Packer Co. .....
Rock Island Plow Co. 96
Roots, P. H. & F. M. Co. .....
Ross-Meehan Foundries 145
Rotary Disc Bit Co. .....
Ryerson, Joseph T. & Son 145

S

Sand Springs Water Co. 141
Shaffer, J. E. Co. 141
Shippers Car Line Co. 140
Sinclair Refining Co. 31
Sivyer Steel Castings .....
Smith Separator Co. 14
Smith Steel Couplings .....
South Chester Tube Co. .....
Spence, H. M. 141
Spengler Core Drilling Co. .....
Stalder, Walter 144
Standard Engineering Co. .....
Standard Seamless Tube Co. .....
Standard Tank Car Co. .....
Stanley Belting Corp. .....
Star Drilling Machine Co. .....
Stewart Iron Works Co. .....
Stewart, Irvine E. 146
Stull, J. C. 144
Sullivan Machinery Co. .....
Superior Tube Co. 85
Swartwout Co. .....

T

Tagliabue, C. J., Mfg. Co. .....
Texas City Terminal Railway Co. .....
Texas Co., The 120
Texas Gulf Sulphur Co. .....
Texas Oil Pump Co. .....
Thomas, J. Elmer 145
Tide Water Oil Co. .....
Titusville Forge Co. .....
Titusville Iron Works 81
Tnemec Paint & Oil Co. .....
Toledo Pipe Threading Machine Co...125
Trimont Mfg. Co. 135
Trumble Gas Trap Co. .....
Truscon Steel Co. 98
Tulsa Ice Co. 141

U

Union Machine Co. 16
United Iron Works..... 78
Universal Oil Products Co. 103

V

Vogt, Henry, Machine Co. .....

W

Wall Rope Works, Inc. .....
Walworth Mfg. Co. .....
Warren City Tank & Boiler Co. 124
Washburne, C. W. 144
Waukesha Motor Co. 127
Weaver, Ralph M. Jr. 146
Westcott Valve Co. .....
Westerman Bros. 143
Western Bank Supply Co. 141
Western Machinery Co. 12
Westinghouse Electric & Mfg. Co.... 39
Wheeling Steel Corp. 128
White Company .....
Wickwire-Spencer Steel Corp. 119
Wico Electric Co. 2
Williams, J. H. & Co. 123
Williams Tool Corp. .....
Williamsport Wire Rope Co. 100
Wilson & Snyder .....
Wilson & Willard Mfg. Co. .....
Wilson Welder & Metals Co. .....
Winchester, Dean E. 143
Wood & Wood 145
Worthington Pump & Mach. Corp... 74
Wright, Harry F. 143
Wright Mfg. Co. 121

Y

Yale & Towne Mfg. Co. .....